

TM 5-4110-204-13

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS LIST)

**REFRIGERATOR, PREFABRICATED; PANEL TYPE; W/O
REFRIGERATING EQUIPMENT; MILITARY SPECIFICATIONS**

MIL-R-10932

TYPE I, CLASS I AND II

600 CU FT, FSN 4110-269-5096

600J CU FT, FSN 4110-926-9544

1200 CU FT, FSN 4110-926-4159

1800 CU FT, FSN 4110-057-0321

1800J CU FT, FSN 4110-168-1937

3000 CU FT, FSN 4110-264-6226

4000 CU FT, FSN 4110-269-5071

TYPE II, CLASS I AND II

400 CU FT, FSN 4110-618-8709

600 CU FT, FSN 4110-618-8710

800 CU FT, FSN 4110-618-8711

1200 CU FT, FSN 4110-618-8712

1400 CU FT, FSN 4110-618-8713

1600 CU FT, FSN 4110-618-8714

SAFETY PRECAUTIONS

Keep hands free from the striker hatch plate and latch when going in or out of the refrigerator.

Disconnect the electrical power before making any repairs to the electrical components.

Be sure inside walk-in door latch is in proper operating condition to prevent personnel from becoming locked inside the refrigerator.

Change

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 WASHINGTON, D.C., 7 October 1983

**Operator's, Organizational, and Direct Support
 Maintenance Manual
 (Including Repair Parts List)**

**REFRIGERATOR, PREFABRICATED; PANEL TYPE, W/O
 REFRIGERATING EQUIPMENT; MILITARY SPECIFICATIONS
 MIL-R-10932**

600 cu ft NSN 4110-00-269-5096	600J cu ft NSN 4110-00-926-9544
1200 cu ft NSN 4110-00-926-4159	1800 cu ft NSN 4110-00-057-0321
1800J cu ft NSN 4110-00-168-1937	3000 cu ft NSN 4110-00-264-6226
TK600J cu ft NSN 4110-00-571-5027	4000 cu ft NSN 4110-00-269-5071
TK1200J cu ft NSN 4110-00-574-5744	TKR600A cu ft NSN 4110-01-119-3960
TK4000J cu ft NSN 4110-00-574-5789	TKR1200A cu ft NSN 4110-01-120-5735
TKR4000A cu ft NSN 4110-01-119-3962	TKR1800A cu ft NSN 4110-01-119-3961

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WASHINGTON, D.C., 26 February 1982Operator's, Organizational, and Direct Support
Maintenance Manual
(Including Repair Parts List)REFRICERATOR, PREFABRICATED; PANEL TYPE, W/O
REFRIGERATING EQUIPMENT; MILITARY SPECIFICATIONS
MIL-R-10932
TYPE I, CLASS I and II

600 cu ft NSN 4110-00-269-5096	600J cu ft NSN 4110-00-926-9544
AA-1200 cu ft NSN 4110-01-113-6577	1800 cu ft NSN 4110-00-057-0321
1600J cu ft NSN 4110-00-166-1937	3000 cu ft NSN 4110-00-264-6226
TK600J cu ft NSN 4110-00-571-5027	4000 cu ft NSN 4110-00-269-5071
TK1200J cu ft NSN 4110-00-574-5744	
TK4000I cu ft NSN 4110-00-574-5789	

TYPE II, CLASS I AND II

400 cu ft NSN 4110-00-618-8709	600 cu ft NSN 4110-00-618-8710
800 cu ft NSN 4110-00-618-8711	1200 cu ft NSN 4110-00-618-8712
1400 cu ft NSN 4110-00-618-8713	1600 cu ft NSN 4110-00-618-8714

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Chief of Staff

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**Operator's, Organizational, and Direct Support
Maintenance Manual
(Including Repair Parts List)**

**REFRIGERATOR, PREFABRICATED; PANEL TYPE, W/O
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M-R-10932**

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600 cu ft NSN 4110-00-269-5096

600J cu ft NSN 4110-00-926-9544

1200 cu ft NSN 4110-00-926-4159

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1800J cu ft NSN 4110-00-168-1937

3000 cu ft NSN 4110-00-264-6226

TK600J cu ft NSN 4110-00-571-5027

4000 cu ft NSN 4110-00-269-5071

TK1200J cu ft NSN 4110-00-574-5744

TK4000J cu ft NSN 4110-00-574-5789

TYPE II, CLASS I AND II

400 cu ft NSN 4110-00-618-8709

600 cu ft NSN 4110-00-618-8710

800 cu ft NSN 4110-00-618-8711

1200 cu ft NSN 4110-00-618-8712

1400 cu ft NSN 4110-00-618-8713

1600 cu ft NSN 4110-00-618-8714

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**Operator's, Organizational, and Direct Support
Maintenance Manual
(Including Repair Parts List)**

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REFRIGERATING EQUIPMENT; MILITARY SPECIFICATIONS**

MIL-R-10932

TYPE 1, CLASS 1 and 11

600 cu ft., NSN 4110-00-269-5096

600J cu ft., NSN 4110-00-926-9544

1200 cu ft., NSN 4110-00-926-4159

1800 cu ft., NSN 4110-00-057-0321

1800J cu ft., NSN 4110-00-168-1937

3000 cu ft., NSN 4110-00-264-6226

4000 cu ft., NSN 4110-00-269-5071

TYPE 11, CLASS 1 AND 11

400 cu ft., NSN 4110-00-618-8709

600 cu ft., NSN 4110-00-618-8710

800 cu ft., NSN 4110-00-618-8711

1200 cu ft., NSN 4110-00-618-8712

1400 cu ft., NSN 4110-00-618-8713

1600 cu ft., NSN 4110-00-618-8714

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2-5 and 2-6
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D-13 through D-18

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1-1 through 1-1
2-1 and 2-2
2-5 and 2-6
4-3 and 4-4
D-3 through D-8
D-13 through D-18

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Official:

VERNE L. BOWERS

*Major General, United States Army
The Adjutant General*

CREIGHTON W. AB
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Refrigeration Equipment.

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**Operator's, Organizational, and Direct Support
Maintenance Manual**

**REFRIGERATOR, PREFABRICATED, PANEL TYPE, W/O
REFRIGERATING EQUIPMENT, MILITARY SPECIFICATIONS MIL-R-10932
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1800J CU. FT. NSN 4110-00-168-1937, 600J CU. FT. NSN 4110-00-926-9544
1800 CU. FT. NSN 4110-00-057-0321, 4000 CU. FT. NSN 4110-00-269-5071
3000 CU. FT. NSN 4110-00-264-6226**

TYPE I, CLASS I AND II

**400 CU. FT. NSN 4110-00-618-8709, 800 CU. FT. NSN 4110-00-618-8711
1400 CU. FT. NSN 4110-00-618-8713, 600 CU. FT. NSN 4110-00-618-8710
1200 CU. FT. NSN 4110-00-618-8712, 1600 CU. FT. NSN 4110-00-618-8714**

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Page 2 of cover. Add the following warning to the list of safety precautions.

WARNING

The burning of polyurethane foams is dangerous. Due to the chemical composition of a polyurethane foam, toxic fumes are released when it is burned or heated. If it is burned or heated indoors, such as during a welding operation in its proximity, precautions should be taken to adequately ventilate the area. An exhaust system equivalent to that of a paint spray booth should be used. Air supplied respirators, approved by the National Institute for Occupational Safety and Health or the US Bureau of Mines, should be used for all welding in confined spaces and when ventilation is inadequate. Individuals who have chronic or recurrent respiratory conditions, including allergies and asthma, should not be employed in this type of environment.

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Official:

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General, United States Army
Chief of Staff

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

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DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 9 May 1974

**Operator's Organizational, and
Direct Support Maintenance Manual
(Including Repair Parts List)**

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800 CU FT, FSN 4110-618-8711
1400 CU FT, FSN 4110-618-8713**

**600 CU FT, FSN 4110-618-8710
1200 CU FT, FSN 4110-618-8712
1600 CU FT, FSN 4110-618-8714**

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i
None
2-1 and 2-2
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Figure 4-1
4-3
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D-5 through D-12
D-15 through D-22

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i
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3-9 and 3-10
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4-3
A-1
D-5 through D-12
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Direct Support Maintenance Manual
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1600 CU FT, FSN 4110-618-8714

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

a. These instructions are published for use by personnel to whom the panel type refrigerator is issued. They provide information on the operation and maintenance of the equipment. Also included are descriptions of main units and their function in relationship to other components.

b. Appendix A contains a list of publications applicable to this manual. Appendix B contains the list of Items Troop Installed or Authorized for use with the equipment. Appendix C contains the maintenance allocation chart. The organizational maintenance repair parts and special tools are listed in appendix D.

c. Numbers in parentheses on illustrations indicate quantity. Numbers preceding nomenclature callouts on illustrations indicate the preferred maintenance sequence.

d. You can improve this manual by recommending improvements using DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 (Recommended Changes to Equipment Technical Manuals) located in the back of the manual and mail the form direct to Commander, US Army Troop Support Command, ATTN: AMSTS-MPP, 4300 Goodfellow Blvd., St. Louis, MO 63120. A reply will be furnished direct to you.

e. To enable timely and effective evaluation, it is important that complete and comprehensive data be submitted on DA Form 2028, including the reason for submission if that fact is not self-evident.

1-2. Record and Report Forms

For record and report forms applicable to operator, crew and organizational maintenance, refer to TM 38-750.

Section II. DESCRIPTION AND DATA

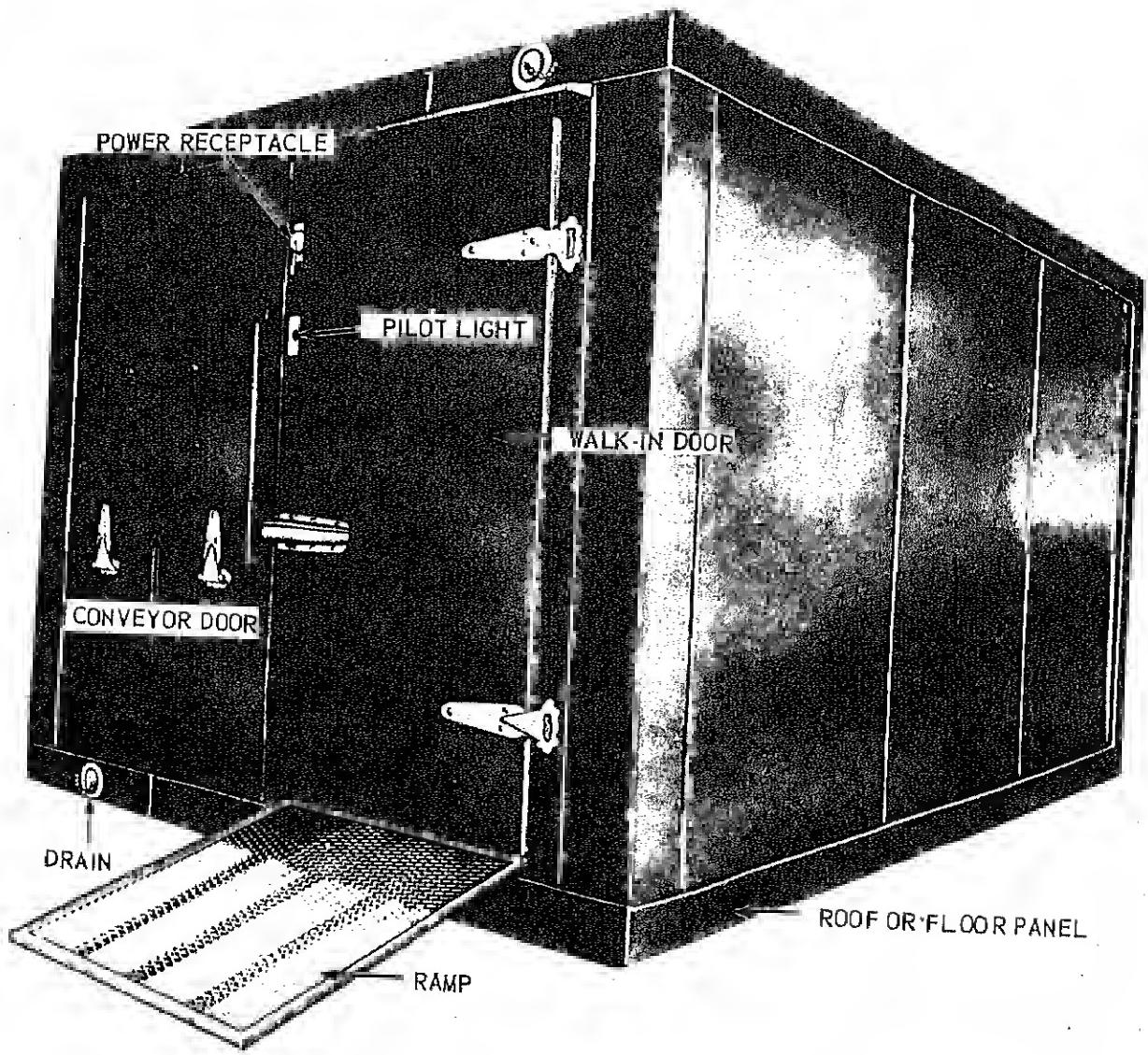
1-3. Description

a. *General.* The prefabricated walk-in refrigerators (fig. 1-1 through 1-4) are assembled from interchangeable panels. There are two types of units: these are Type I and Type II. The Type I refrigerators are 600, 1200, 1800, 3000 and 4000 cubic feet units, while the Type II refrigerators are 400, 600, 800, 1200, 1400, and 1600 cubic feet units. The Type I and Type II refrigerators are of the same construction and differ only in width. The Type I units are three panel or 12 ft. 9 $\frac{1}{2}$ in. wide, while the Type II units are two panel or 8 ft. 11 23/32 in. wide. All panels with the exception of the roof and floor panels are interchangeable between the two type refrigerators. All prefabricated refrigerators are constructed in accordance with Military Specifica-

tion MIL-R-10932. The 600 cubic feet Type I unit and 400 and 600 cubic feet Type II units are single units while the units larger than 600 cubic feet are divided into compartments.

The Class 1 panels are constructed of a wooden frame with fiber glass insulation and are covered with sheet aluminum on both sides. The Class 2 panels are the same as Class 1 with exception that the exterior skin is steel and the interior skin is zinc coated, and not painted. The 1800J model refrigerators (Urethane) are constructed similar to the Type I Class 1 refrigerators with the addition of polyurethane foam in place of insulation.

b. *Type I, 600 Cubic Feet Unit.* The Type I, 600 cubic feet unit consists of one walk-in door panel with door, one conveyor panel with door,



NOTE: ROOF AND FLOOR PANELS ARE INTERCHANGEABLE

ME 4110-204-13/1-1 C2

Figure 1-1. Single compartment refrigerator, right-front, three-quarter view, see

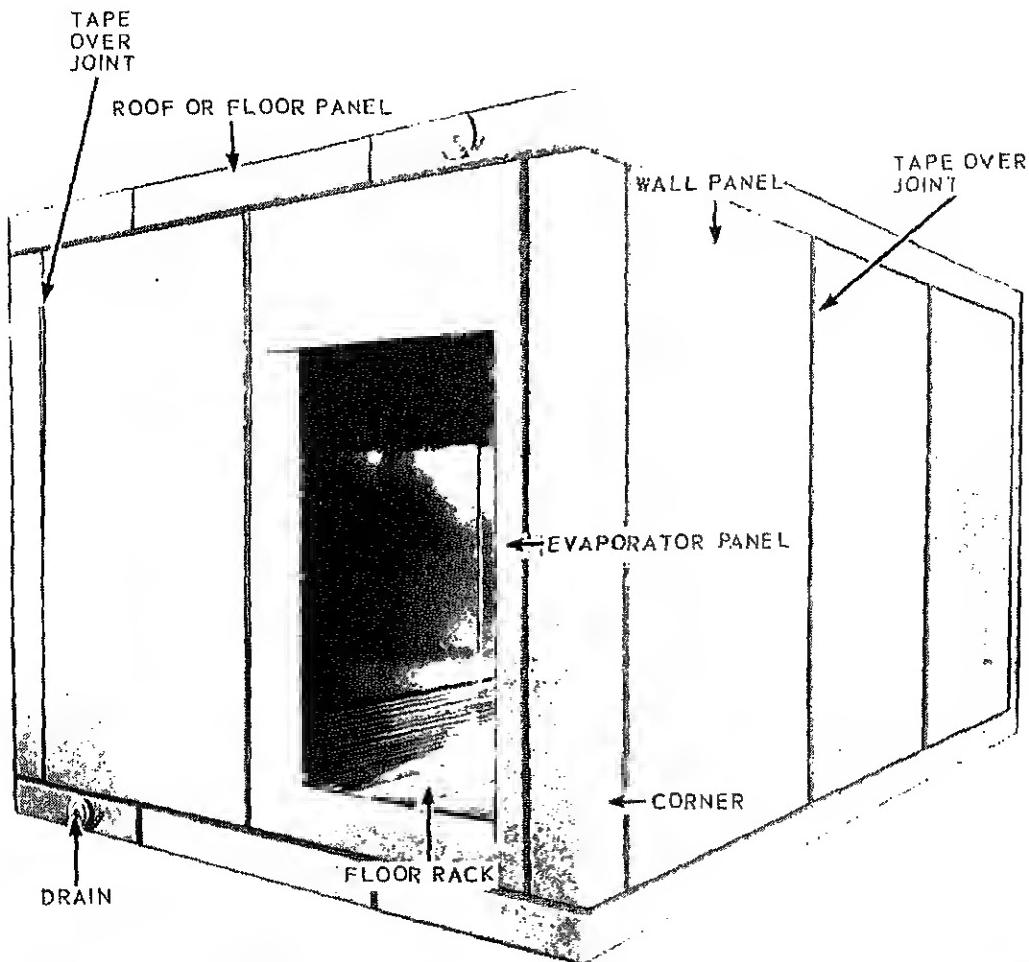
one evaporator panel, seven wall panels, four corner panels, three roof and three floor panels. The roof and floor panels are interchangeable throughout each type-size, and wall panels are interchangeable throughout all types and sizes. This refrigerator is equipped with three hardwood floor racks, four shelving units, a thermometer, outside power receptacle, inside light, an outside indicating light and two floor drains.

NOTE

The conveyor panel with door is optional equipment. When not required, this panel is replaced with an additional standard wall.

c. *Type I, 1200 Cubic Feet Unit.* The Type I, 1200 cubic feet unit is a single compartment refrigerator consisting of one walk-in door with ramp and canopy, one conveyor door, two evaporator panels, five roof panels, five floor panels and four corner panels. This unit is equipped with five hardwood floor racks, nine shelving units, a thermometer, outside power receptacle, inside light, outside indicating light and two floor drains.

d. *Type I, 1800 Cubic Feet Unit.* The Type I, 1800 cubic feet unit is a two compartment refrigerator consisting of two walk-in doors, with ramps, and canopies, two conveyor doors, two evaporator panels,



panels, and three partition panels. The 1800 cubic foot refrigerator is equipped with six hardwood floor racks, nine shelving units, two thermometers, two

side indicating lights and four floor drains. The 18 Model refrigerator (Urethane) is supplied with hardwood floor racks and has no shelving units.

e. Type I, 3000 Cubic Feet Unit. The Type I, 3000 cubic feet unit is a three-compartment refrigerator consisting of three walk-in doors with ramps and canopies, three conveyor doors, three evaporator panels, eleven roof panels, eleven floor panels, four corner panels, and six partition panels. The 3000 cubic feet refrigerator contains eleven hardwood floor racks, twenty-one shelving units, three thermometers, three outside power receptacles, three inside lights and four floor drains.

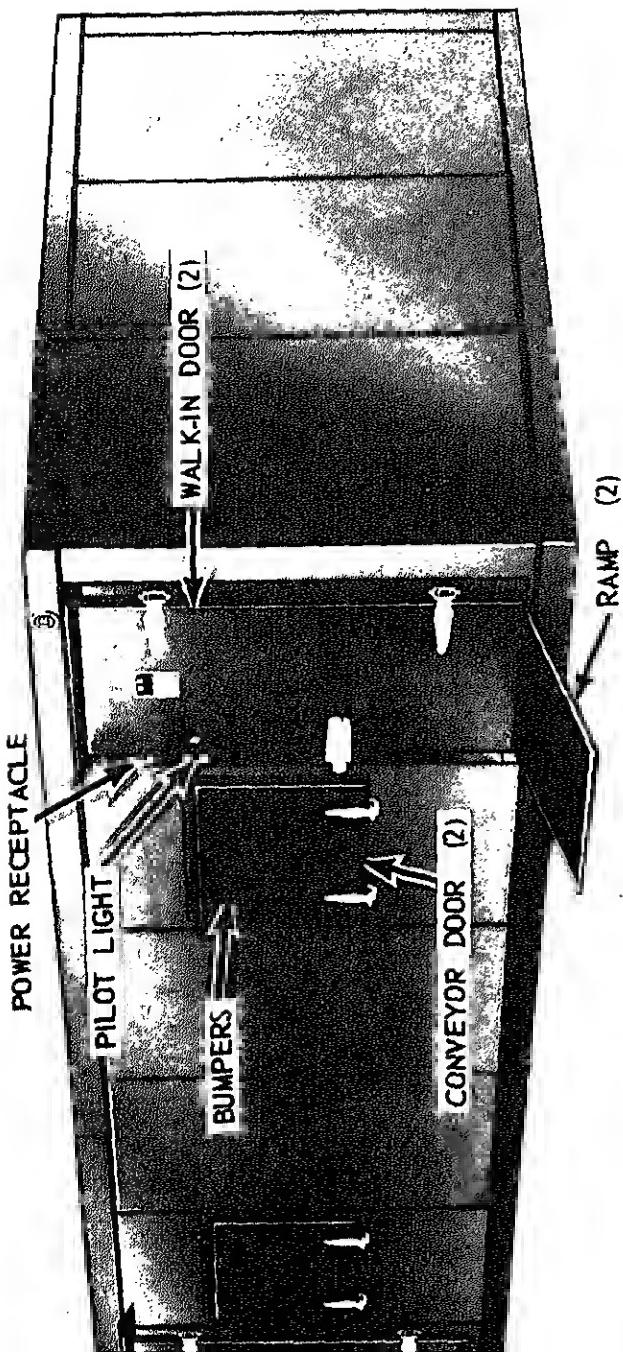
f. Type I, 4000 Cubic Feet Unit. The Type I, 4000 cubic feet unit is a four-compartment refrigerator consisting of four walk-in doors with ramps and canopies, four conveyor doors, four evaporator panels, fifteen roof panels, twenty-two wall panels and nine partition panels. The 4,000 cubic feet refrigerator is equipped with fifteen hardwood floor racks, thirty shelving units, four thermometers, four outside power receptacles, three inside lights and four floor drains.

g. Type II, 400 Cubic Feet Unit. The Type II, 400 cubic feet unit is a single-compartment refrigerator consisting of one walk-in door panel with door, one ramp and canopy, two evaporator panels, five standard wall panels, three floor panels, three ceiling

panels and four corner panels. The 400 cubic feet refrigerator is equipped with three hardwood floor racks, three shelving units, a thermometer, an outside power receptacle, an inside light, an indicating light, and a floor drain.

h. Type II, 600 Cubic Feet Unit. The Type II, 600 cubic feet unit is a single-compartment refrigerator consisting of one walk-in door panel with door, one ramp and canopy, two unit cooler panels, seven standard wall panels, four floor panels, four ceiling panels, and four corner panels. The 600 cubic feet refrigerator is equipped with four hardwood floor racks, four shelving units, a thermometer, outside power receptacle, inside light, an indicating light, and two floor drains.

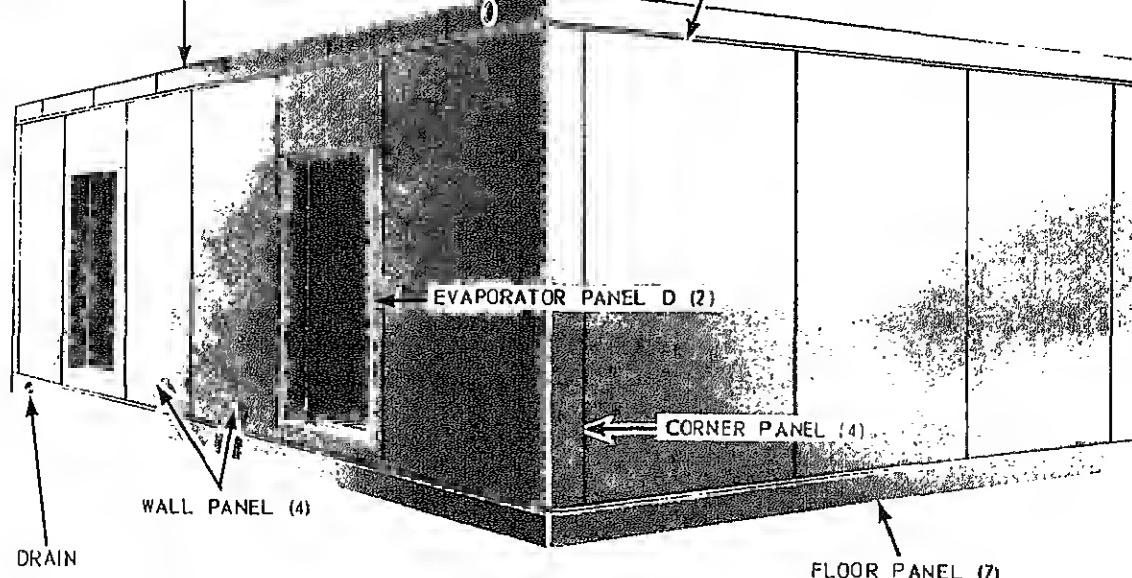
i. Type II, 800 Cubic Feet Unit. The Type II, 800 cubic feet unit is a two-compartment refrigerator consisting of two walk-in door panels with doors, two ramps, two canopies, four unit cooler panels, six standard wall panels, five ceiling panels, five floor panels, four corner panels and two partition panels. This 600 cubic feet refrigerator is equipped with five hardwood floor racks, ten shelving units, two thermometers, two outside power recep-



NOTE: ROOF AND FLOOR PANELS ARE INTERCHANGEABLE.

ME 4110-204-13/1-3 C

Figure 1-3. Double compartment refrigerator, right front, three-quarter view.



NOTE: ROOF AND FLOOR PANELS ARE INTERCHANGEABLE.

MEC 4110-204-13/1-4

Figure 1-4. Double compartment refrigerator, left-rear, three-quarter view

tacles, two inside lights, two indicating lights and two floor drains.

j. *Type II, 1200 Cubic Feet Unit.* The Type II, 1200 cubic feet unit is a three compartment refrigerator consisting of three walk-in door panels with doors, three ramps, three canopies, six unit cooler panels, eight standard wall panels, seven ceiling panels, seven floor panels, four corner panels and six partition panels. This 1200 cubic feet refrigerator is equipped with seven hardwood floor racks, nine shelving units, three thermometers, three outside power receptacles, three inside lights, three indicating lights and two floor drains.

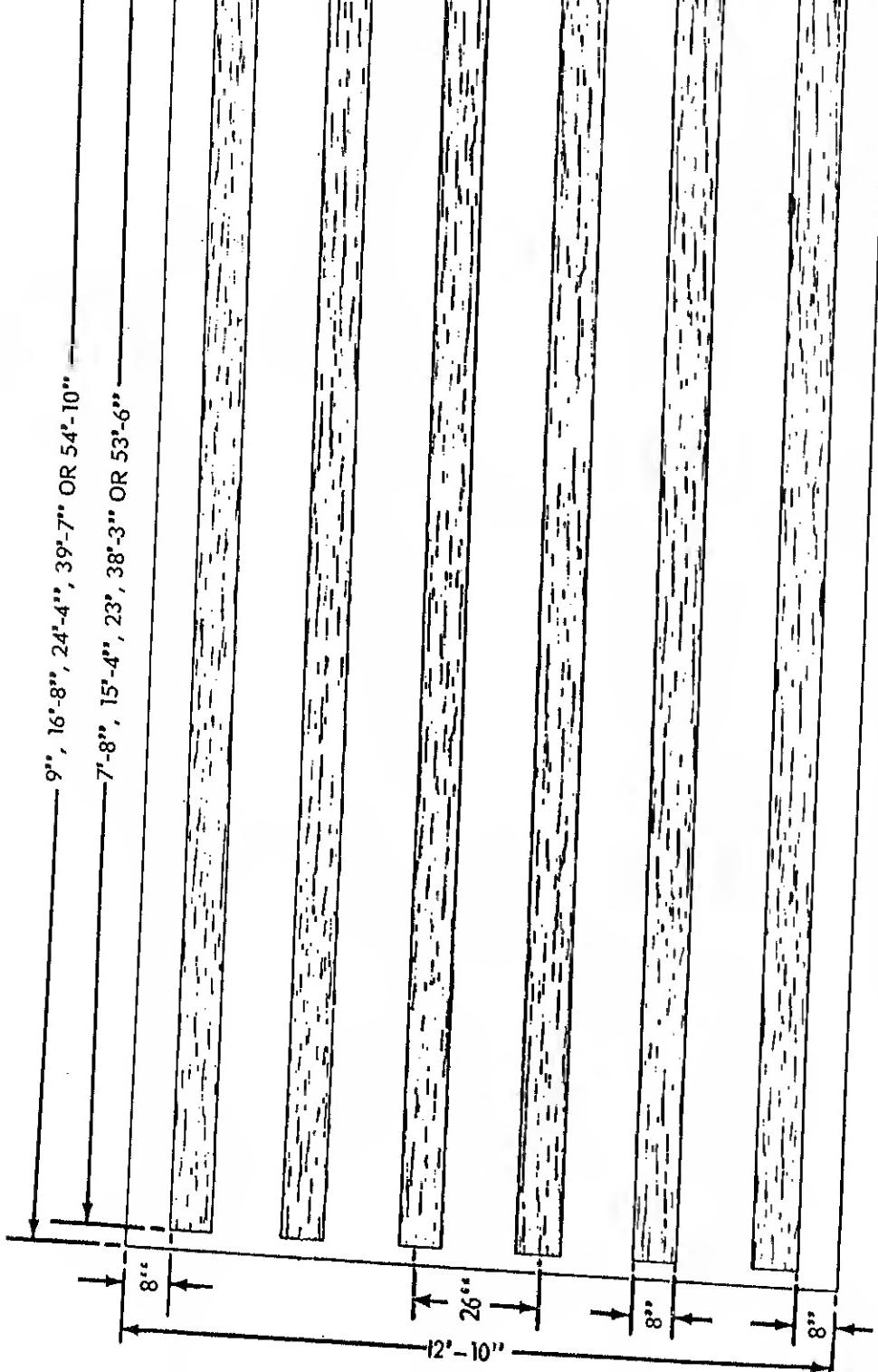
k. *Type II, 1400 Cubic Feet Unit.* The Type II, 1400 cubic feet unit is a three compartment refrigerator consisting of three walk-in door panels with doors, three ramps, three canopies, six unit cooler panels, ten standard wall panels, eight ceiling panels, eight floor panels, four corner panels and eight partition panels. This 1400 cubic feet refrigerator is equipped with nine hardwood floor racks, 12 shelving units, three thermometers, three outside power receptacles, three inside lights, three indicating lights and two floor drains.

cubic feet refrigerator is equipped with eight hardwood floor racks, ten shelving units, three thermometers, three outside power receptacles, three inside lights, three indicating lights and two floor drains.

l. *Type II, 1600 Cubic Feet Unit.* The Type II, 1600 cubic feet unit is a three compartment refrigerator consisting of three walk-in door panels with doors, three ramps, three canopies, six unit cooler panels, eleven standard wall panels, nine ceiling panels, nine floor panels, four corner panels and four partition panels. This 1600 cubic feet refrigerator is equipped with nine hardwood floor racks, 12 shelving units, three thermometers, three outside power receptacles, three inside lights, three indicating lights and two floor drains.

1-4. Identification and Tabulated Data

a. *Identification.* An identification plate is mounted on the door of each walk-in door panel. The plate contains the following information:



NOTE: REFER TO FIGURES 4-1 AND 4-2 FOR EACH INDIVIDUAL SIZE
REFRIGERATOR TO BE ERECTED.

Figure 1-5. Base Plan, Type I refrigerators

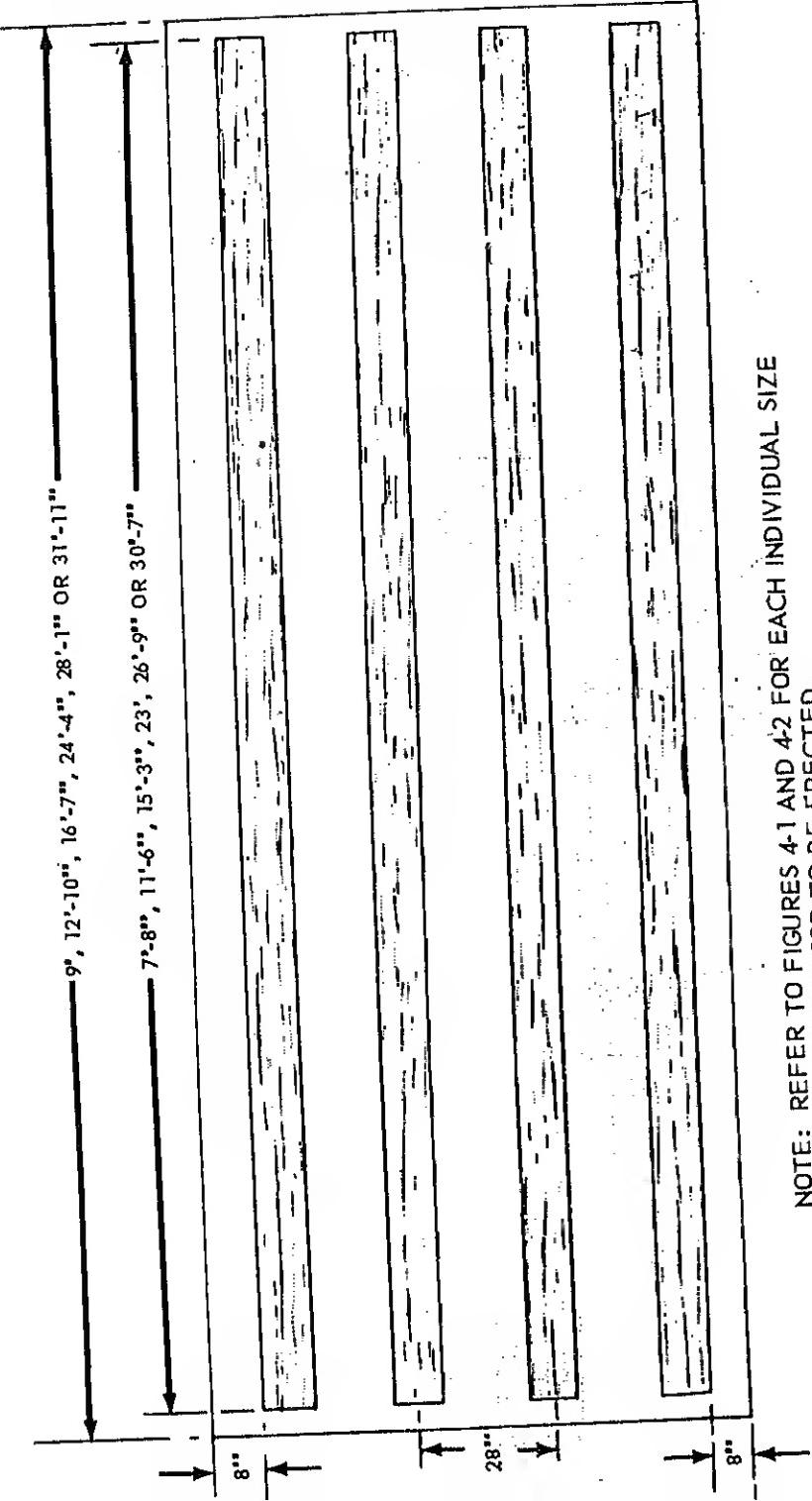


Figure 1-6. Base plan, Type II refrigerators

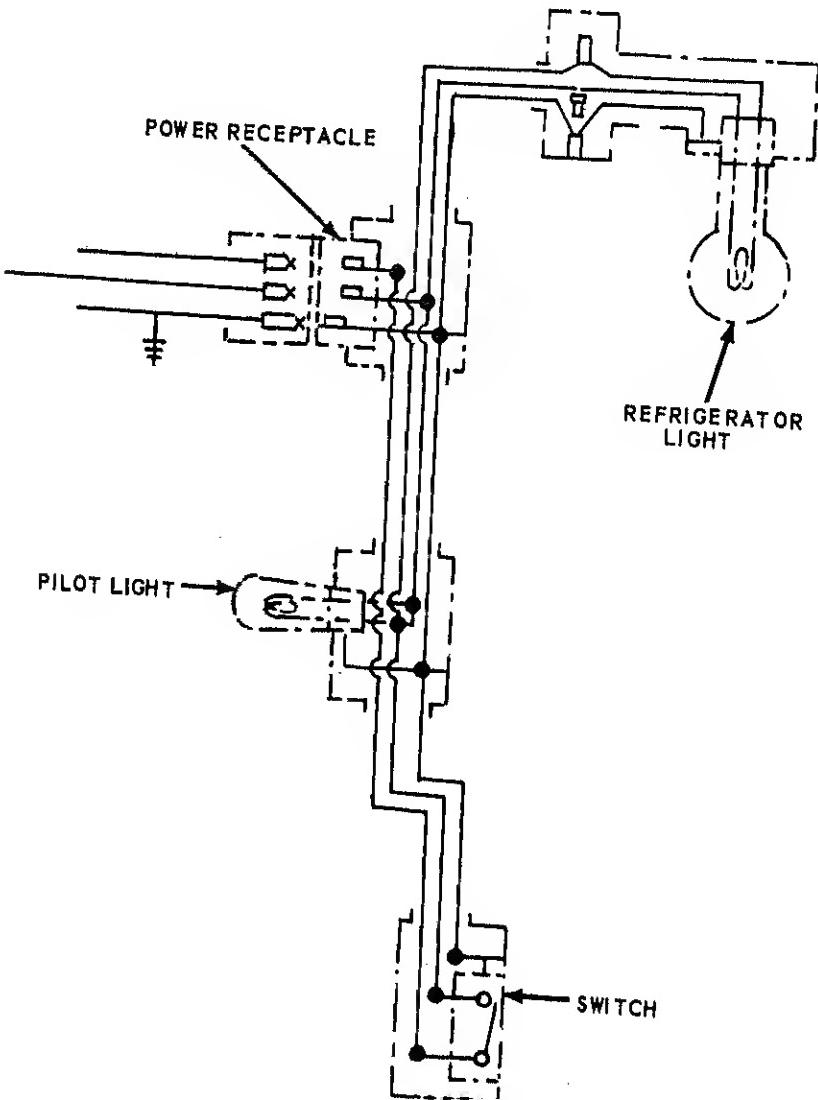
size. Each identification plate specifies the nomenclature, manufacturer, class, model number and serial number.

b. *Tabulated Data.*

(1) *General.* Due to the fact that this manual covers all sizes of the Type I and Type II refrigerators and that the prefabricated panels from which the units are assembled are manufactured

by numerous manufacturers, panels are interchangeable. Various manufacturers all made from the same drawings), the operational and organizational maintenance will refer to the identification of the door of the unit for desired.

(2) *Base plan.* Refer to figure



the base of the Type I refrigerators, and to figure 1-6 for the base plan for the Type II units.

NOTE

The cribbing used are 8 in. x 8 in. timbers for both the Type I and Type II refrigerators. The width of the base plans remain the same but the length will vary with refrigerator size as shown.

(3) *Wiring diagrams.* Refer to figure 1-7 for a practical wiring diagram.

1-5. Differences in Models

This manual covers the 600-cubic foot, 1200-cu. ft., 1800-cu. ft., 3000-cu. ft., and 4000-cu. ft., Type I, Class I and II refrigerators and the 400-cu. ft., 600-cu. ft., 800-cu. ft., 1200-cu. ft., 1400-cu. ft., and 1600-cu. ft., Type II, Class I refrigerators. The only unit differences are the various sizes as stated above and the design modifications incorporated in the 600-cu. ft., Type I units (FSN 4110-269-5096). In this type unit and the 1800J model (FSN 4110-287-3161), all panel gaskets are attached to the panels with staples, thereby eliminating the gasket retainers and retainer screws used in all other models covered by this manual.

CHAPTER 2

INSTALLATION AND OPERATING INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

2-1. Unloading the Equipment

a. The crated panels and components of the prefabricated refrigerators may be shipped either by tractor-trailer or rail. The operator and organizational maintenance personnel will remove all tie-down cables, strapping, blocking, and the like, which secure the crated or skid-mounted components to the bed of the carrier. Refer to figure 2-1 and remove all tie-downs and blocking.

b. Use a suitable lifting device of sufficient capacity, and remove the crated or skid-mounted components from the bed of the carrier.

2-2. Unpacking the Refrigerator

Remove banding, crating, and blocking, being extremely careful not to damage the panels. If skid mounted, cut the strapping and remove cushioning and spacers. Unpack separately packed components from the container. Remove tape from drains, switches, and power receptacles.

2-3. Inspecting and Servicing Equipment

a. Inspecting.

(1) Make a complete visual inspection of all component parts of the prefabricated refrigerator for loss of parts or damage which may have occurred during shipment.

(2) Tighten all loose mounting hardware and replace damaged or missing parts. Inspect for a clogged drain strainer. Make certain all latches are in proper working condition.

(3) Before placing any panel in position, make certain all panel hooks rotate freely and are rotated fully counterclockwise. Remove all foreign material from panel fastener recesses and make sure hooks are not damaged or bent. Lubricate as necessary.

b. Servicing.

(1) Perform the quarterly preventive maintenance services (para 3-7).

(2) Lubricate all latches and hinges (para 3-4).

(3) Wipe all moisture from doors and door gaskets.

2-4. Installation and Setting-Up Instructions

a. The refrigerator must be setup on a flat, level surface or platform capable of withstanding 250 pounds per square foot. It is desirable to pick a shaded area to increase the efficiency of the refrigerator.

b. The refrigerator may be set up inside or outside a shed or building.

c. Set up the refrigerator in the numerical sequence as illustrated in figure 2-2 commencing with a corner panel A. Assembly may commence in both directions, ending with a corner panel A. It may be necessary to remove a corner panel to facilitate installation of the last wall panel B.

d. Fasten the refrigerator panels together as instructed in figure 2-3.

2-5. Installation of Separately Packed Components

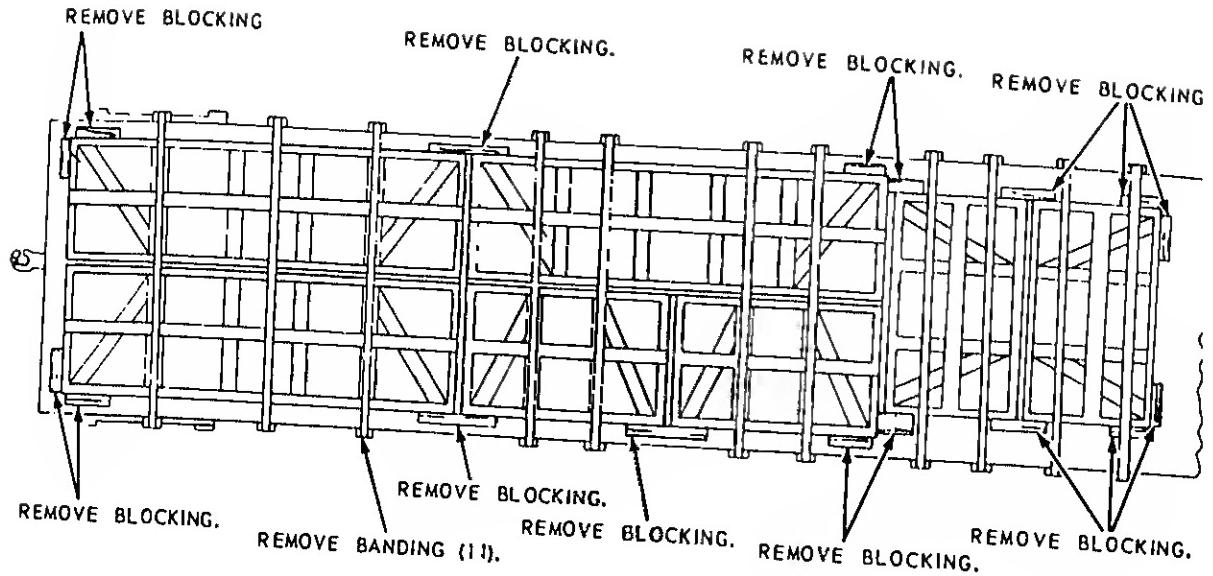
a. Install the ramp in its proper location shown in figure 2-2.

b. Install the floor racks in their proper position in the refrigerator.

c. Refer to figure 2-4 and install the light as instructed.

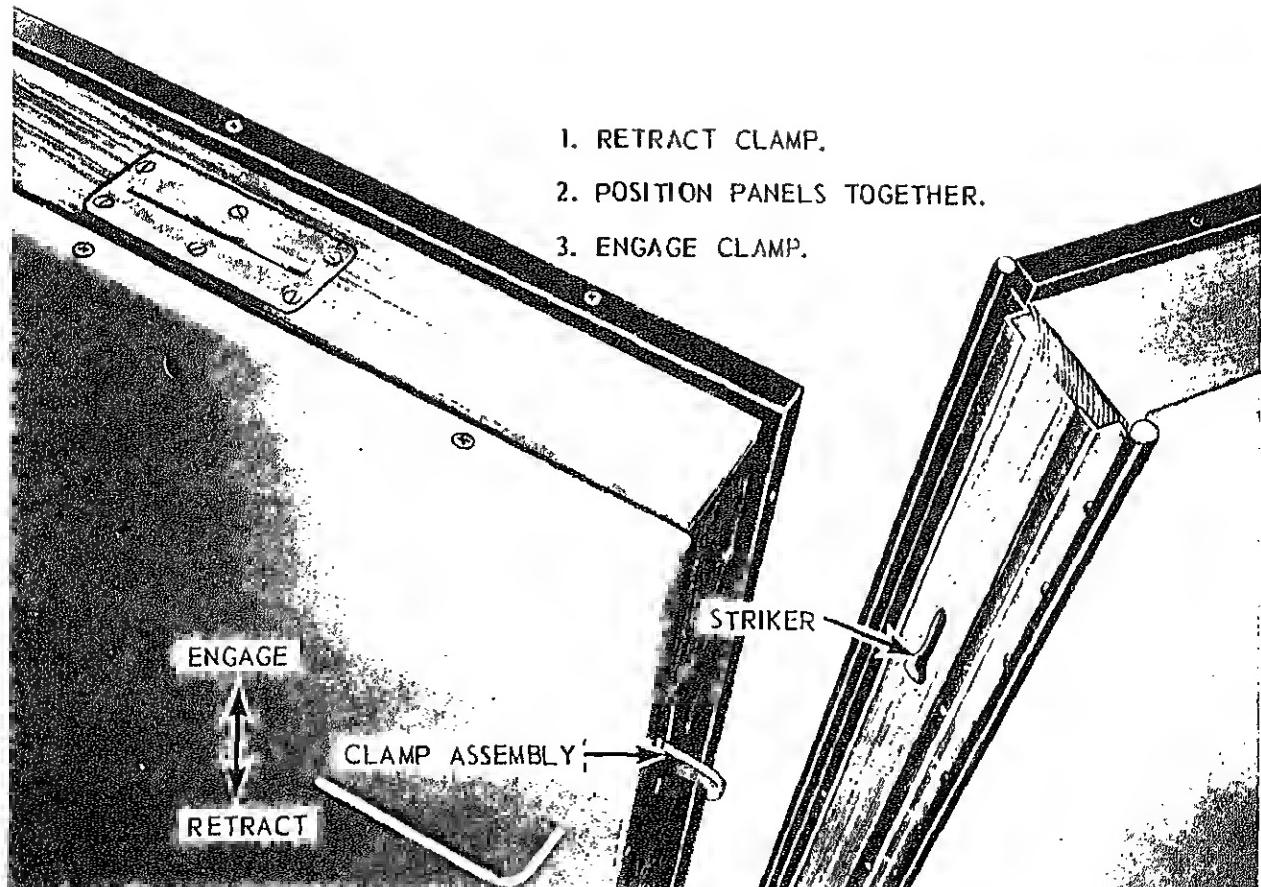
d. Refer to figure 2-4 and install the thermometer as instructed.

e. Install tape over panel joints in figure 1-2. Tape should be installed on roof joints first and then the wall and floor.



MEC 4110-204-13 2-1

Figure 2-1. Blocking and tie-downs.



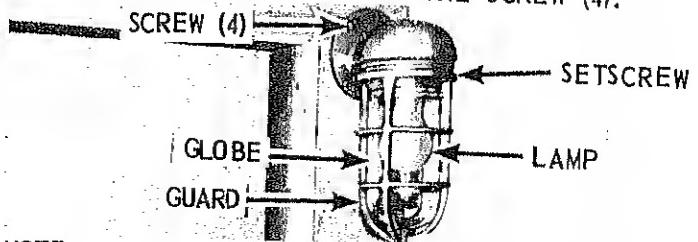
NOTE: CONNECT THE REMAINING PANELS IN THE SAME MANNER.

NOTE: INSTALL METAL PLUG IN CLAMP ASSEMBLY HOLE.

MSC 4110-204-15/6

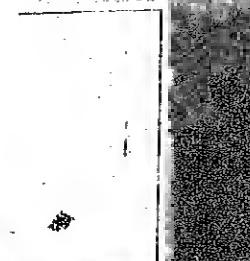
Figure 2-3. Refrigerator panels, installation

ON THE WALK-IN DOOR PANEL, AND INSTALL THE SCREW (4).



NOTE: LOOSEN SETSCREW AND UNSCREW THE GUARD, GLOBE, AND LAMP.

WALK-IN DOOR PANEL

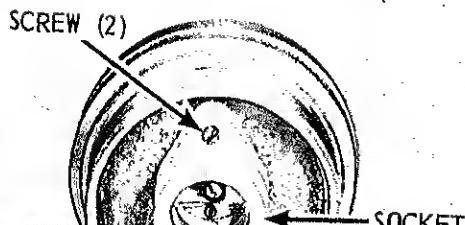


THERMOMETER

SCREW (2)

NOTE: POSITION THE THERMOMETER ON THE WALK-IN DOOR PANEL AND INSTALL THE SCREW (2).

A. LIGHT ASSEMBLY AND THERMOMETER



SCREW (2)

SOCKET

GASKET

NOTE: REMOVE THE SCREW (2) AND PULL DOWN ON THE SOCKET AND GASKET.

B. LAMP SOCKET

WAREHOUSE LIGHT HEAD

WIRE (2)

SCREW (2)

SOCKET

NOTE: LOOSEN SCREW (2). ATTACH WIRE (2) AND TIGHTEN SCREWS. REPLACE THE SOCKET, LAMP, GLOBE AND GUARD.

Section II. MOVEMENT TO A NEW WORKSITE

2-6. Dismantling for Movement

- a. Disconnect the external power supply cable.

NOTE

Remove tape from all joints before disassembly of panels.

- b. Refer to figure 2-4 and remove the light assembly in the reverse order of installation.

- c. Refer to figure 2-4 and remove the thermometer in the reverse order of installation.

- d. Refer to figure 2-3 and disconnect the refrigerator panels in the reverse order as shown.

- e. Refer to figure 2-2 and disassemble the refrigerator in the reverse order of assembly.

- f. Crate the components in the original shipping

crates, if available. For short distance, or if original shipping crates are not available, place the components in easily handled loads on skids. Place cushioning material and wooden spacers between surfaces that are easily damaged. Secure the skids with metal banding. Cushion the thermometers with cellulose wadding or other cushioning material. Pack the cushioned items with basic issue items in a suitable fiberboard container.

- g. Refer to paragraph 2-1 and load and secure the refrigerator crates to the bed of the carrier.

2-7. Reinstalation After Movement

Refer to paragraph 2-1 and reinstall the prefabricated refrigerator as instructed.

Section III. CONTROLS AND INSTRUMENTS

2-8. General

This section describes, locates, illustrates, and furnishes the operator, crew, or organizational maintenance personnel sufficient information about the various controls and instruments for proper opera-

tion of the prefabricated refrigerator.

2-9. Controls and Instruments

The purpose of the controls and instruments and the normal and maximum reading of the instruments are illustrated in figure 2-5.

Section IV. OPERATION OF EQUIPMENT

2-10. General

The instructions in this section are published for the information and guidance of the personnel responsible for the operation of the prefabricated refrigerator warehouse.

from entering the refrigerator.

2-11. Operation Under Usual Conditions

- a. After the refrigerator is assembled and the refrigeration unit has been connected, the refrigerator is ready for operation. Refer to the appropriate technical manual covering the cooling unit used and op-

2-12. Operation Under Rainy or Humid Conditions

If the unit is installed outside, protect the hinges and latches by coating them with a waterproof substance, such as grease or heavy oil to prevent rust or corrosion. Use canvas or other water proof material to protect the unit as much as possible in order to reduce the rusting and corrosion action.

2-13. Operation in Salt-water Areas

THERMOMETER INDICATES TEMPER-
ATURE IN DEGREES FAHRENHEIT.

A. THERMOMETER

B. LIGHT SWITCH

PULLED TO TURN
INSIDE LIGHT ON
AND PUSHED TO
TURN INSIDE LIGHT
OFF

PILOT LIGHT IS ON TO
INDICATE THAT LIGHT
IN THE REFRIGERATOR IS ON.

CHAPTER 3

OPERATOR AND ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. OPERATOR AND ORGANIZATIONAL MAINTENANCE TOOLS AND EQUIPMENT

3-1. Special Tools and Equipment

No special tools or equipment are required by the operator or organizational maintenance personnel for the maintenance of the prefabricated refrigerator warehouse.

3-2. Basic Issue Tools and Equipment

Tools and repair parts issued with or auth-

orized for the prefabricated refrigerator are listed in the basic issue items list, Appendix B of this manual.

3-3. Organizational Maintenance Repair Parts

Organizational maintenance repair parts are listed and illustrated in Appendix D.

Section II. LUBRICATION AND PREVENTIVE MAINTENANCE SERVICES

3-4. Lubrication

The prefabricated refrigerator requires lubrication of the door hinges and latch only. Clean the hinges and latch with an approved cleaning solvent and apply a lightweight oil sparingly as required.

3-5. Preventive Maintenance Services, General

To insure that the prefabricated refrigerator is ready for operation at all times, it must be inspected systematically, so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance services to be performed are listed consecutively and are described in paragraphs 3-6 and 3-7. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the unit shall be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noted during operation which would damage the equipment if operation were continued. All deficiencies and shortcomings will be recorded together with the corrective action

3-6. Daily Preventive Maintenance Services

This paragraph contains an illustrated tabulated listing of preventive maintenance services which must be performed by the operator or crew. The item numbers are listed consecutively and indicate the sequence of minimum requirements. Refer to figure 3-1 for the daily preventive maintenance services.

3-7. Quarterly Preventive Maintenance Services

a. This paragraph contains an illustrated tabulated listing of preventive maintenance services which must be performed by organizational maintenance personnel at quarterly intervals. A quarterly interval is equal to 3 calendar months or 250 hours of operation, whichever occurs first.

b. The item numbers are listed consecutively and indicate the sequence of minimum requirements. Refer to figure 3-2 for the quarterly preventive maintenance services.

3-8. General

The instructions in this section are pub-

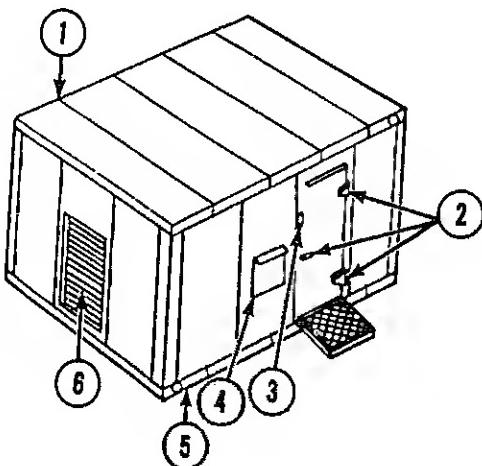
PREVENTIVE MAINTENANCE SERVICES

DAILY

TM 5-4110-204-13

PANEL TYPE

REFRIGERATOR,
PREFABRICATED



ITEM

ITEM	PAR REF
1	<u>REFRIGERATOR.</u> Inspect panels for serviceability and secure mounting.
2	<u>DOOR HANDLES, LATCHES, AND HINGES.</u> Inspect for cracks, breaks, excessive wear, loose or missing hardware.
3	<u>PILOT LIGHT LAMP.</u> Check for proper operation and damage.
4	<u>CONVEYOR DOOR.</u> Inspect for cracks, breaks, deterioration of weather stripping and all other damage. Clean with an approved cleaning solvent and allow to dry thoroughly.
5	<u>FLOOR DRAIN.</u> Inspect for cracks, breaks, and damaged threads. Clean with an approved cleaning solvent.
6	<u>RACKS.</u> Inspect for visual signs of wear and damage. Clean with an approved cleaning solvent and dry thoroughly.

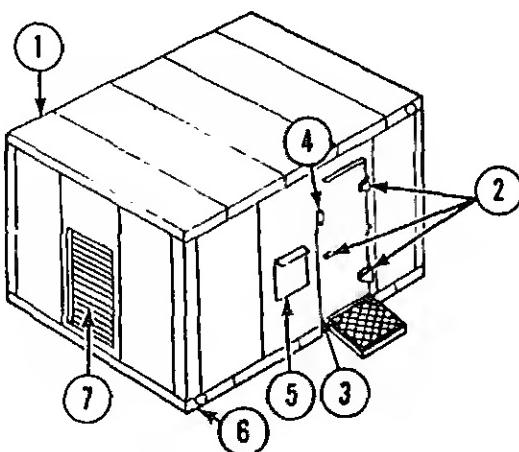
PREVENTIVE MAINTENANCE SERVICES

QUARTERLY

TM 5-4110-204-13

PANEL TYPE

REFRIGERATOR,
PREFABRICATED



ITEM	PAR REF
1 <u>REFRIGERATOR</u> . Inspect panels for serviceable condition and replace if necessary.	
2 <u>DOOR HANDLES, LATCHES AND HINGES</u> . Inspect for cracks, breaks, excessive wear, loose or missing hardware. Replace as necessary. Polish door handle. Oil hinges with OE periodically.	3-22
3 <u>POWER RECEPTACLE</u> . Inspect receptacle and cover for cracks and breaks. Replace as necessary. Clean all parts with an approved solvent and dry thoroughly.	3-17
4 <u>PILOT LIGHT LAMP</u> . Inspect for proper operation and damage. Replace as necessary. Clean cover and lens with an approved solvent and dry thoroughly.	3-18
5 <u>CONVEYOR DOOR</u> . Inspect door for cracks, breaks, weather stripping and a defective seal. Replace as necessary.	3-23
6 <u>FLOOR DRAIN</u> . Inspect for serviceability, secure mounting, and leaks.	3-32

ITEM

PAR REF

7

RACKS. Inspect visually for serviceability. Replace as necessary.

3-9. Refrigerator Light Lamp

a. Removal. Refer to figure 3-3 and remove the refrigerator light lamp.

b. Installation. Refer to figure 3-3 and install the refrigerator light lamp.

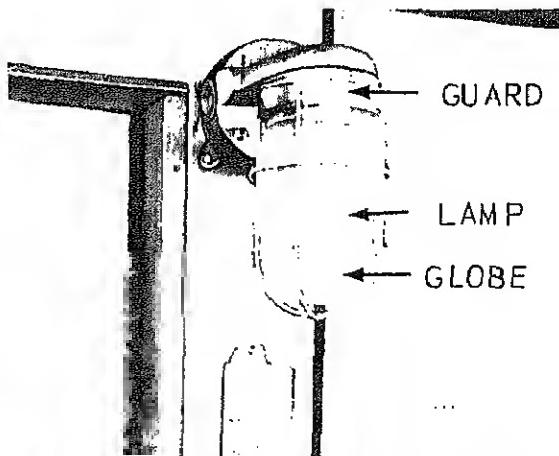
3-10. Pilot Light Lamp

a. Removal. Refer to figure 3-4 and remove the pilot light lamp.

b. Installation. Refer to figure 3-4 and install the pilot light lamp.

3-11. General

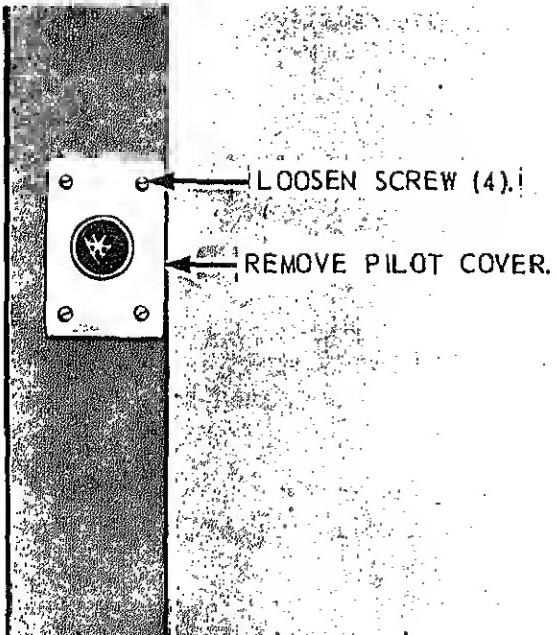
This section provides information useful in diagnosing and correcting unsatisfactory operation or failure of the refrigerator and its components. Each trouble symptom stated is followed by a list of probable causes of the trouble. The possible remedy recommended is described opposite the probable cause.



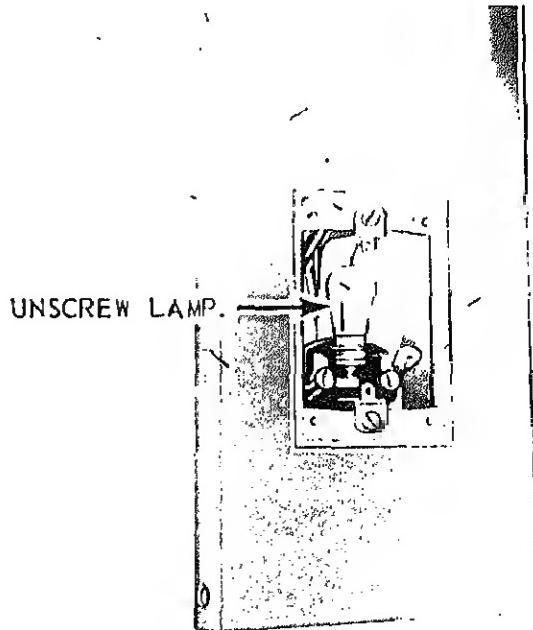
NOTE: REMOVE SETSCREW FROM
GUARD AND REMOVE GUARD,
GLOBE AND LAMP.

MEC 4110-204-13/3-3

Figure 3-3. Refrigerator light lamp, removal and installation



A. COVER



B. LAMP

Section IV. TROUBLESHOOTING

3-12. Lights Inoperative

Probable cause	Possible remedy
Defective switch	Replace switch (para. 3-19).
Loose wiring connections	Tighten wiring connections and repair wiring.
Defective receptacle	Replace receptacle (para. 3-18).
External power supply	Connect power supply.

3-13. Drains Inoperative

Probable cause	Possible remedy
Clogged drain	Clean drain strainer.
Cap on drain outlet	Remove cap from outlet.
Drain pipe clogged	Remove strainer and clean drain pipe (para. 3-32).

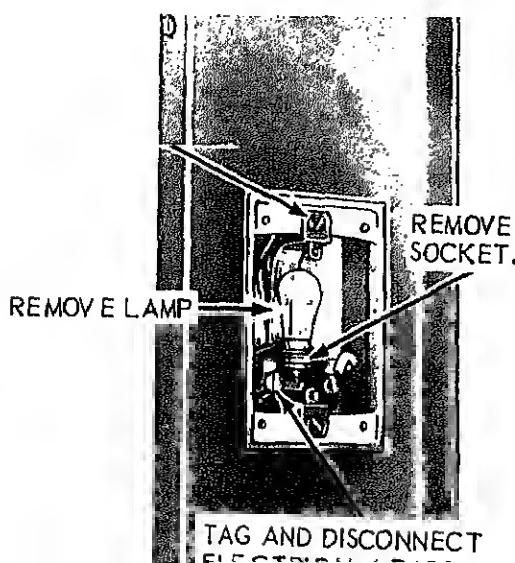
3-14. Refrigerator Does Not Retain Proper Cooling Temperature

Probable cause	Possible remedy
Door striker plate not properly adjusted	Adjust striker latch (para. 3-22).
Door gasket worn or missing	Replace gasket (para. 3-28).
Door defective	Replace door (para. 3-21).
Outside or inside skin damaged	Repair or replace panel (para. 3-30).

Section V. ELECTRICAL COMPONENTS

3-15. General

The electrical components of refrigerator are the inside light, pilot light, light switch, and plug receptacle with the necessary wiring to complete the circuit.



3-16. Refrigerator Light Assembly

a. Removal. Refer to figure 2-4 and remove the refrigerator light assembly.

b. Installation. Refer to figure 2-4 and install the refrigerator light assembly.

3-17. Pilot Light

a. Removal.

- (1) Refer to paragraph 3-10 and remove the pilot light cover.
- (2) Refer to figure 3-5 and remove the pilot light socket.

b. Installation.

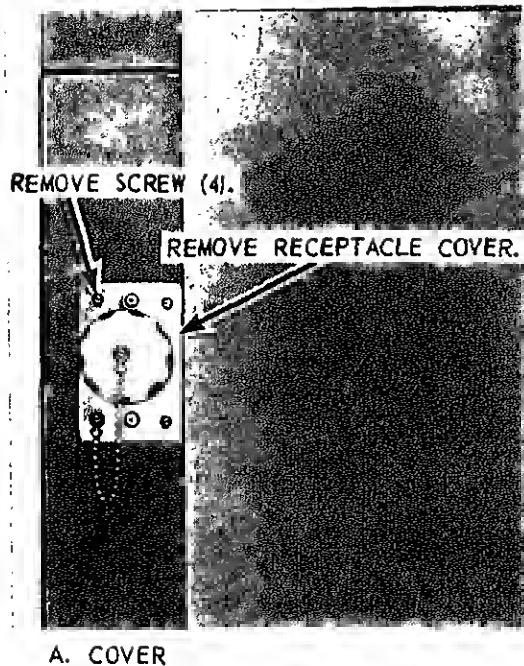
- (1) Refer to figure 3-5 and install the pilot light socket.
- (2) Refer to paragraph 3-10 and install the pilot light cover.

3-18. Plug Receptacle

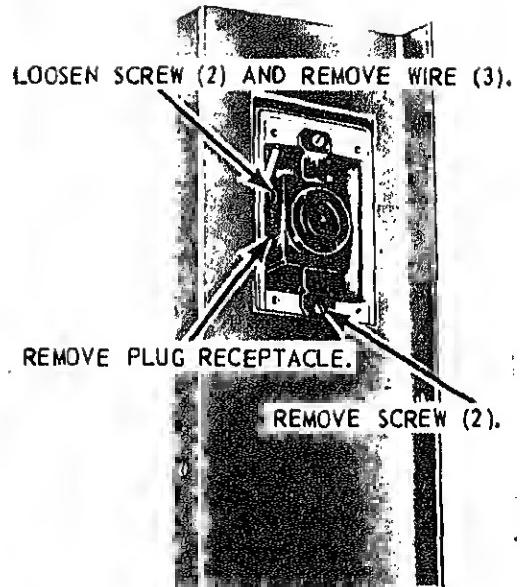
a. Removal. Refer to figure 3-6 and remove the plug receptacle.

b. Installation. Refer to figure 3-6 and install the plug receptacle.

3-19. Light Switch



A. COVER



B. RECEPTACLE

ME 4110-204-13/3-6 C2

Figure 3-6. Plug receptacle, removal and installation.

Section VI. REFRIGERATOR COMPONENTS

3-20. General

This section provides organizational maintenance personnel with instruction necessary for maintenance of the refrigerator components which consists of walk-in door panels, conveyor door panels, wall panels, corner panels, floor and roof panels, hardwood floor racks, and the necessary hardware to complete the refrigerator.

3-21. Walk-In Door

a. *Removal.* Refer to figure 3-8, and remove the walk-in door.

b. *Installation.* Refer to figure 3-8 and install the walk-in door.

3-22. Walk-In Door Handles and Latch

b. *Installation.* Refer to figure 3-9, and install the walk-in door handles and latch.

c. *Adjustment.* Refer to figure 3-9, and adjust the striker latch to provide an airtight fit when the door is closed.

3-23. Conveyor Door

a. *Removal.* Refer to figure 3-8, and remove the conveyor door.

b. *Installation.* Refer to figure 3-8, and install the conveyor door.

3-24. Conveyor Door Latch and Handle

The 1800J model refrigerator conveyor door latch is identical to the walk-in door latch.

a. *Removal.*

(1) Refer to figure 3-10, and remove the conveyor door handle.

(2) Refer to figure 3-10, and remove the

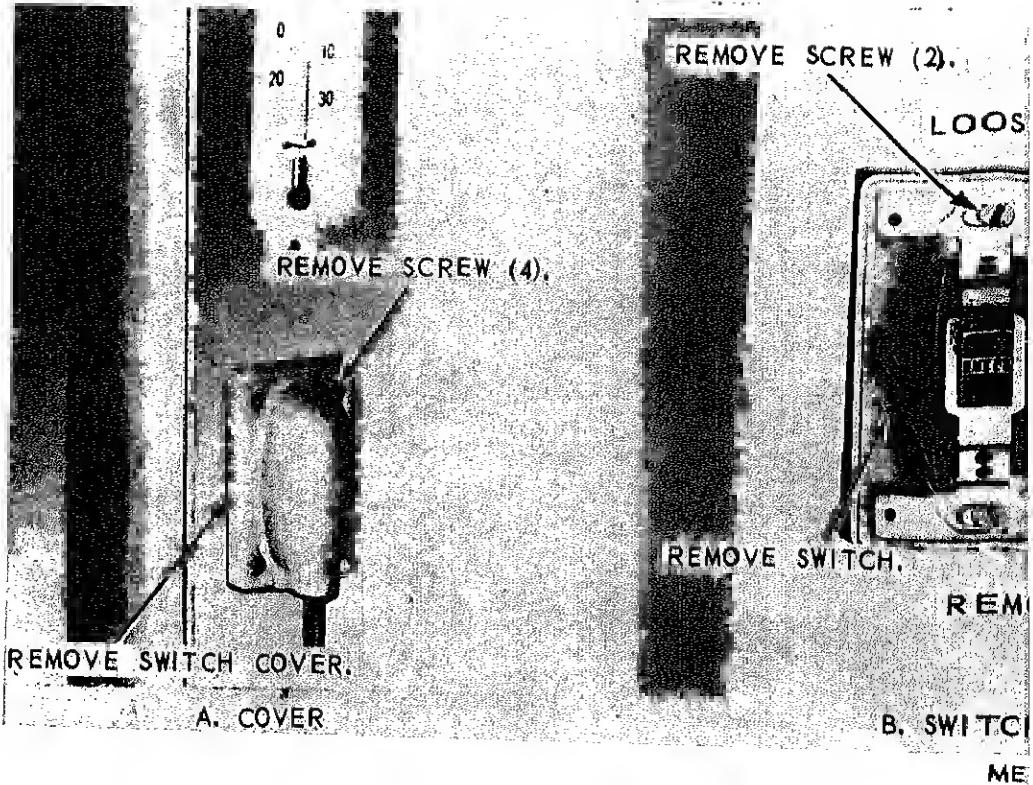


Figure 8-7. Light switch, removal and installation.

b. Installation.

(1) Refer to figure 8-11, and install the conveyor door latch.

(2) Refer to figure 8-10, and install the conveyor door handle.

3-25. Conveyor Door Roller

The 1800J model refrigerator does not have a conveyor door roller.

a. Removal. Refer to figure 8-10, and remove the conveyor door roller.

b. Installation. Refer to figure 8-10, and install the conveyor door rollers.

3-26. Conveyor Door Curtain

a. Removal. Refer to figure 8-10, and remove the conveyor door curtain.

b. Installation. Refer to figure 8-10, and install the conveyor door curtain.

a. Removal. Refer to figure 8-10, and move the conveyor door canopy.

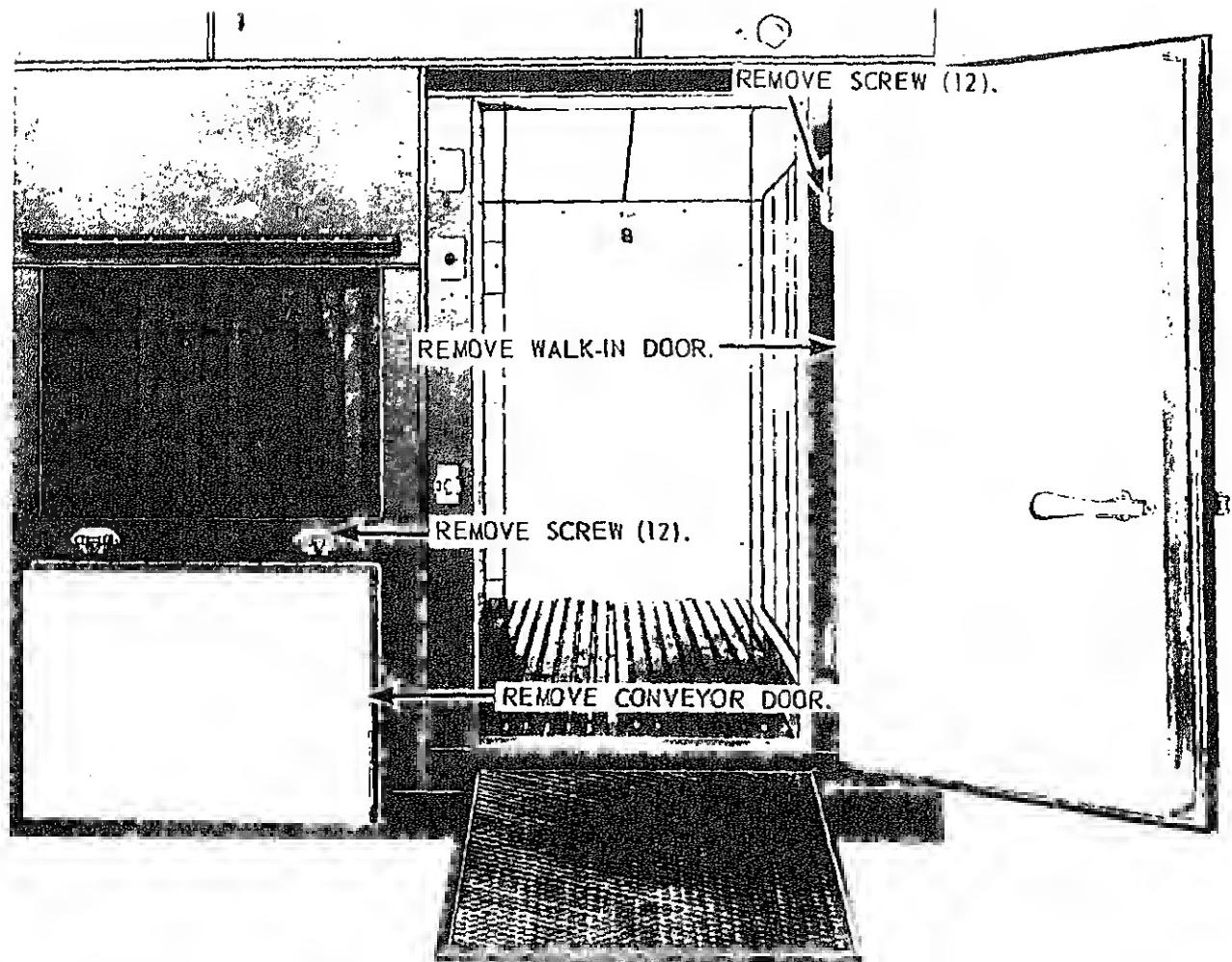
b. Installation. Refer to figure 8-10, and install the conveyor door canopy.

NOTE

On the 600-cu. ft., Type I unit (FSN 4110-269-5096) and the 1 1/2 cu. ft. unit (FSN 4110-287-3161), all gaskets are attached with staples. If retainers and retainers are used, remove gaskets, pry out staples with a common screwdriver. At gaskets with staples (0.63 x 1 in.) spaced 2 1/2 inches apart.

3-28. Refrigerator Panel

NOTE: OPEN THE DOOR AND USE SUITABLE BLOCKING BEFORE REMOVING DOORS.



NOTE: REMOVE ALL REMAINING WALK-IN DOORS OR CONVEYOR DOORS IN THE SAME MANNER.

ME 4110-204-13-3-8 13

Figure 3-8. Walk-in and conveyor doors, removal and installation.

3-29. Panel Clamp Assemblies

a. *Removal.* Refer to figure 3-13, and remove the panel clamp assemblies.

b. *Installation.* Refer to figure 3-13, and install the panel clamp assemblies.

b. *Repair.* When the skin of the panels is cracked, torn, or punctured, thereby exposing the insulation, the refrigerator will not cool properly and must be repaired. Repair the panels as instructed below.

(1) *Minor repairs.*

(c) Apply epoxy mixture and patch material from repair kit as specified.

(e) Apply tape over the entire patch area and the panel is ready for use.

(f) For damaged areas up to 144 sq. in., follow above steps for use of repair kit, but apply epoxy to cloth, nylon, or like type material which has been cut to 2 to 3 inches greater in each direction of the hole to be covered.

(g) Affix the patch over the damaged area.

(h) Tape the patch in vertical and horizontal directions so that the patch will not move while curing. It will take approximately 2 hours for the patch to adhere properly.

(2) Major Repairs.

(a) Obtain a metal plate large enough to cover the damaged area.

(b) Apply a watertight sealer between the metal plate and the surface of the panel to be repaired.

(c) Press plate tightly against the panel, and secure it with sheet metal screws.

NOTE

If the fiberglass insulation should become saturated with moisture due to leakage of the panel, the panel should be removed and the moisture baked out of it. If the

panel becomes very soggy, insulation must be replaced in the panel. The 1800J model refrigerator has polyurethane insulation.

c. Installation. Refer to paragraph 2-4, and the refrigerator panels.

3-31. Thermometer

a. Removal. Refer to paragraph 2-5, and the thermometer from the door panel.

b. Installation. Refer to paragraph 2-5 and the thermometer on the door panel.

3-32. Drain Strainer

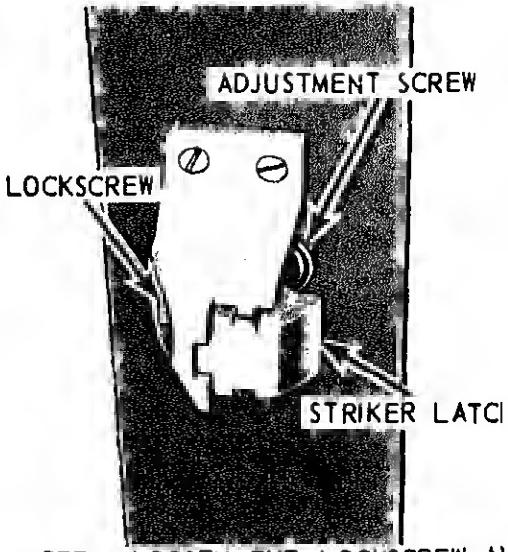
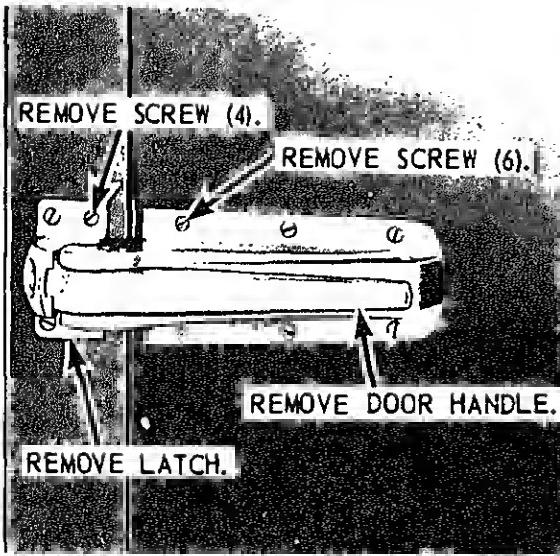
a. Removal. Refer to figure 3-14, and remove drain strainer.

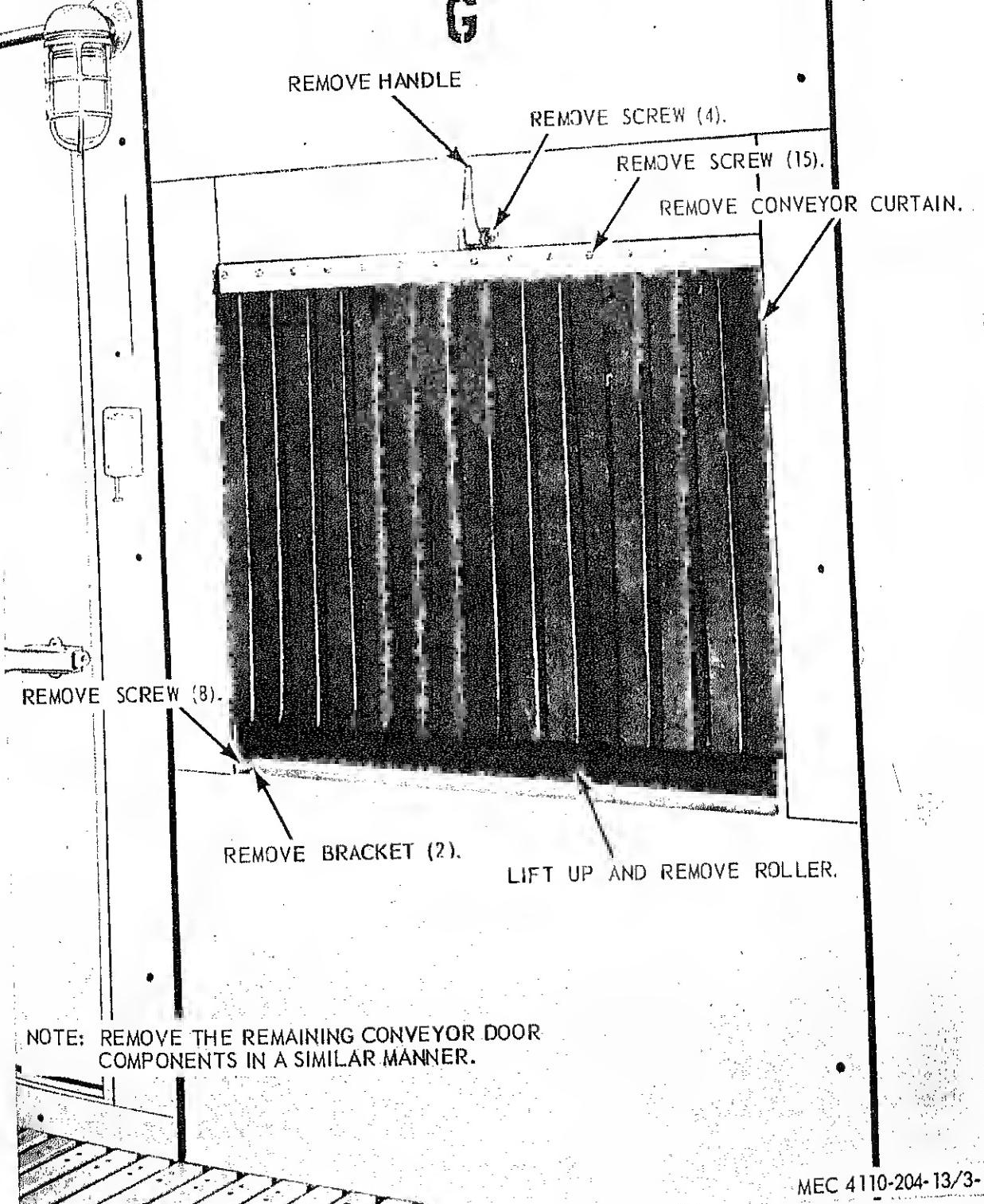
b. Installation. Refer to figure 3-14, and install drain strainer.

3-33. Slide Bolts

a. Removal. Remove the four screws that secure the slide bolts to the partition panels, and remove the slide bolts.

b. Installation. Position the slide bolts to the partition panels, and secure them with four screws.





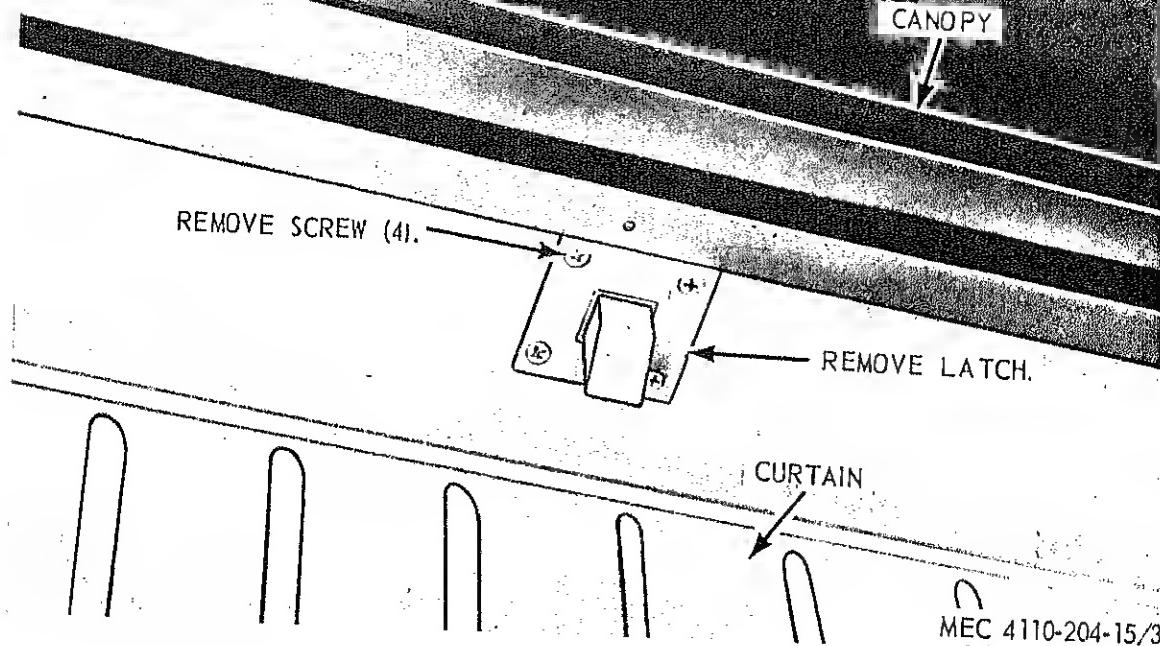


Figure 3-11. Conveyor door latch, removal and installation

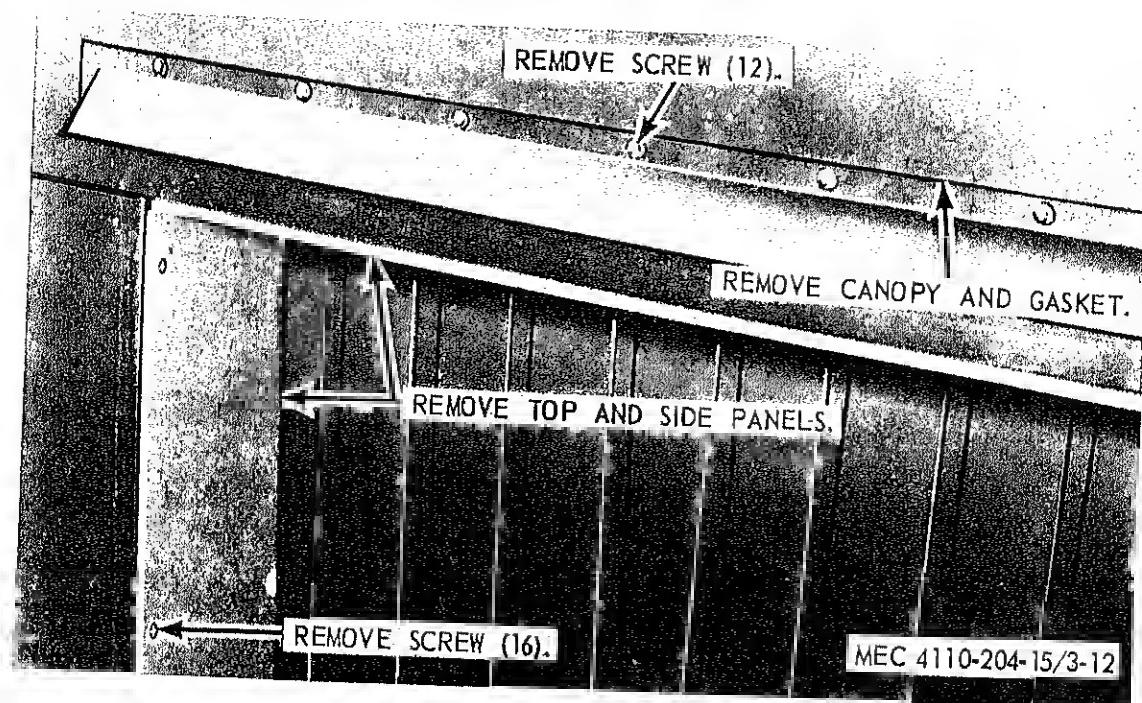


Figure 3-12. Conveyor d-

REMOVE GASKET RETAINER.

REMOVE SCREW (25).

REMOVE SCREW (6).

REMOVE GASKET.

REMOVE CLAMP ASSEMBLY.

NOTE: REMOVE THE REMAINING GASKETS AND CLAMP ASSEMBLIES IN A SIMILAR MANNER.

MSC 4110-204-15/14

Figure 3-13. Refrigerator panel and door seals, and clamp assemblies, removal and installation

REMOVE SCREW (2).

REMOVE DRAIN STRAINER.

FLOOR PANEL

GASKET

MSC 4110-204-15/15

CHAPTER 4

DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

Section I. GENERAL

4-1. Scope

a. These instructions are published for the use of direct support maintenance personnel maintaining the panel type prefabricated refrigerator. They provide information on the maintenance of the equipment, which is beyond the scope of the tools, equipment, personnel, or supplies normally available to using organizations.

b. Report all equipment improvements recommendations as prescribed by TM 38-750.

4-2. Record and Report Forms

For record and report forms applicable to direct support maintenance, refer to TM 38-750.

Note. Applicable forms, excluding Standard Form 46 which is carried by the operator, shall be kept in a canvas bag mounted on the equipment.

Section II. DESCRIPTION AND TABULATED DATA

4-3. Description

For a complete description of the prefabricated refrigerator see paragraph 1-3.

4-4. Tabulated Data

a. *General.* This paragraph contains the time standards and list of components necessary for construction of the various size refrigerators. Refer to paragraph 1-4 for general tabulated data.

b. *Time Standards.* Table 4-1 lists the number of man-hours required under normal conditions for various operations in the maintenance and repair of the prefabricated refrigerators. The man-hours listed are not intended to be rigid standards. Under adverse conditions, the operation will take considerably longer; but under ideal conditions with highly skilled mechanics, most of the operations can be accomplished in considerably less time.

Table 4-1. Time Standards

Removal and Replacement	Hours
22 BODY CHASSIS OR HULL, AND ACCESSORY	1.1
Door latch and hinge assemblies	3.2
Door panels	0.8
Barrel bolt assemblies	3.4
Clamp and striker assembly	2.5
Partition assembly	0.2
Curtain, conveyor door (Includes removal and installation of strips)	0.7
Gasket	2.1
Roller	1.5
Panel assembly (each)	10.6
Floor rack assembly (each)	16.0
1400 cu ft Unit	18.6
1600 cu ft Unit	21.2
800 cu ft Unit	8.0
1200 cu ft Unit	16.0
1800 cu ft Unit	24.0
3000 cu ft Unit	40.0
4000 cu ft Unit	51.4
Type II, Class I:	
400 cu ft Unit	5.3

Lamp	0.3
(Includes removal and installation of guard and cover).	
Cover	0.2
(Includes removal and installation of guard).	
Gasket	0.4
(Includes removal and installation of guard, cover and fittings).	
Power receptacle assembly	0.4
(Includes removal and installation of guard, cover gasket and wiring).	
Cover and gasket	0.2
(Includes removal and installation of guard).	
Guard, power receptacle	0.2
(Includes removal and installation of chain).	
Thermometer	0.2
Strainer assembly	1.8
(Includes removal and installation of plug).	

Canopy
 (Includes removal and installation
 of panels).
 Ramp
c. Refrigerator Component Data. Tab
 and 4-3 list the type and number of
 and other components necessary for co
 tion of all sizes of the Type I and T
 Class I refrigerators. Refer to figures 4
 4-2 for nomenclature identifier callouts
 in the tables.

NOTE

The ramp and conveyor panel wi
 door are optional. When not require
 the conveyor panel with door is r
 placed by a standard wall panel. Th
 1800J Model Refnigerator is simila
 to the Type I, Class I refrigerator.
 For the 1800J unit, the ramp, cor
 veyor panel, and J Panel are optional
 and when the conveyor panel is re
 quired, it replaces other standard wal
 panels.

Table 4-2. Refrigerator Component Data - Type I, Class I

Panel or component nomenclature	Quantity Needed			
	600 cu. ft.	1200 cu. ft.	1800 cu. ft.	3000 cu. ft.
Corner panel	(A)	4	4	4
Standard wall panel	(B)	8	11	14
Walk-in door panel w/door	(C)	1	1	2
Evaporator panel	(D)	1	2	2
Floor or ceiling panel, end, left	(EL)	2	2	2
Floor or ceiling panel, end, right	(ER)	2	2	2
Floor or ceiling panel, center	(F)	2	6	10
Conveyor door panel w/door	(G)	1	1	2
Partition panel	(H1) (H2) (H3)			1 each
Canopy		1	1	2
Ramp		1	1	2
Light globe		1	1	2
Thermometer		1	1	2
Shelving unit		4	9	12
Floor rack, 24 1/4 in. wide		4	4	4
Floor rack, 41 3/4 in. wide		2	6	10

Table 4-2.t. Refrigerator Component Data

Panel or component nomenclature	Number of panels and components used Type I, class I refrigerators				
	600 cu. ft.	1200 cu. ft.	1800 cu. ft.	3000 cu. ft.	4000 cu. ft.
Corner panel	(A)	4	4	4	4
Standard wall panel	(B)	7	10	12	17
Walk-in door panel w/door	(C)	1	1	2	3
Evaporator panel	(D)	1	1	2	3
Floor or ceiling panel, end, left	(EL)	2	2	2	2
Floor or ceiling panel, end, right	(ER)	2	2	2	2
Floor or ceiling panel, center	(F)	2	6	10	18
Conveyor door panel w/door	(G)	1	1	2	3
Partition panel	(H1) (H2) (H3)			1 each	2 each
Canopy		1	1	2	3
Ramp		1	1	2	3
Light globe		1	1	2	3
Thermometer		1	1	2	3
Shelving unit		4	9	12	21
Floor rack, 24 1/4 in. wide		2	2	2	2
Floor rack, 41 3/4 in. wide		1	3	5	9
Tape 4"-OD B/PPP-T-60		1 roll	1 roll	2 rolls	3 rolls
					4 rolls

Panel or component nomenclature	Number of panels or components required for type II, class I units				
	400 cu. ft.	600 cu. ft.	800 cu. ft.	1200 cu. ft.	1400 cu. ft.
Corner panel (A)	4	4	4	4	4
Standard wall panel (B)	5	7	7	8	10
Walk-in door panel with door (C)	1	1	1	3	3
Evaporator panel (D)	2	2	4	5	5
Floor or ceiling panel, end, left (KL)	2	2	2	2	2
Floor or ceiling panel, end, right (KR)	2	2	2	2	2
Floor or ceiling panel center (M)	2	4	6	10	12
Partition panel (H1) (H3)			1 each	2 each	2 each
Canopy	1	1	1	3	3
Ramp	1	1	1	3	3
Light globe	1	1	2	3	3
Thermometer	1	1	2	3	3
Shelving unit	3	4	6	9	10
Floor rack 24 1/4 in. wide	2	2	2	2	2
Floor rack 41 3/4 in. wide	1	2	3	5	6
Tape 4" OD B/PPP-T-60	1 roll	1 roll	1 roll	1 roll	2 rolls

Table 4-3. Refrigerator Component Data Type II, Class I

Panel or component nomenclature	Quantity Needed				
	400-cu. ft.	600-cu. ft.	800-cu. ft.	1200-cu. ft.	1400-cu. ft.
Corner panel (A)	4	4	4	4	4
Standard wall panel (B)	5	7	7	8	10
Walk-in door panel with door (C)	1	1	1	3	3
Evaporator panel (D)	2	2	4	5	5
Floor or ceiling panel, end, left (KL)	2	2	2	2	2
Floor or ceiling panel, end, right (KR)	2	2	2	2	2
Floor or ceiling panel, center (M)	2	4	6	10	12
Partition panel (H1) (H3)			1 each	2 each	2 each
Canopy	1	1	1	3	3
Ramp	1	1	1	3	3
Light Globe	1	1	2	3	3
Thermometer	1	1	2	3	3
Shelving unit	3	4	6	9	10
Floor rack 24 1/4 in. wide	2	2	2	2	2
Floor rack 41 3/4 in. wide	1	2	3	5	6

CHAPTER 5

GENERAL MAINTENANCE INSTRUCTIONS

Section I. SPECIAL TOOLS AND EQUIPMENT

5-1. Special Tools and Equipment

There are no special tools or equipment necessary to perform direct support maintenance on the panel type prefabricated refrigerators.

5-2. Direct Support Maintenance Repair Parts

Direct support maintenance repair parts are

listed and illustrated in Appendix D of this manual.

5-3. Specially Designed Tools and Equipment

There are no specially designed tools or equipment necessary to perform direct support maintenance on the panel type prefabricated refrigerator.

Section II. DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

5-4. General

Direct support maintenance personnel are responsible for replacement of the prefabricated refrigerators when it becomes necessary that the entire units be replaced. Replacement of the data plates which are located on the walk-in doors is also a responsibility of direct support maintenance.

5-5. Prefabricated Refrigerator

a. Removal. Refer to paragraphs 3-30 and 2-6 and remove all ceiling panels, walk-in door panels, conveyor door panels, evaporator panels, corner panels and floor panels.

b. Installation. Refer to paragraphs 3-30 and 2-4 and install all floor panels, corner panels, evaporator panels, conveyor door panels, walk-in door panels and ceiling panels.

APPENDIX A REFERENCES

A-1. Fire Protection

TB 54200-200-10

Hand Portable Fire Extinguishers Approved for Army Users.

A-2. Operating Instructions

TM 54110-203-16

Refrigeration Unit, Panel Type, 9,000 BTU

TM 54110-209-16

Refrigeration Unit, Panel Type, 5,000 BTU

TM 54110-210-14

Refrigeration Unit, Panel Type, 5,000 BTU

TM 54110-212-16

Refrigeration Unit, Panel Type, 10,000 BTU

TM 54110-218-16

Refrigeration Unit, Panel Type, 10,000 BTU

TM 54110-221-14

Refrigeration Unit, Panel Type, 5,000 BTU

TM 54110-226-14

Refrigeration Unit, Panel Type, 10,000 BTU

TM 54110-227-14

Refrigeration Unit, Panel Type, 10,000 BTU

TM 54110-228-14

Refrigeration Unit, Panel Type, 10,000 BTU

APPENDIX B

BASIC ISSUE ITEMS LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED

Section I. INTRODUCTION

B-1. Scope

This appendix lists items required by the operator for operation of the refrigerator.

B-2. General

This list is divided into the following sections:

a. Basic Issue Items List—Section II. Not applicable.

b. Items Troop Installed or Authorized List—Section III. A list of items in alphabetical sequence, which at the discretion of the unit commander may accompany the refrigerator. These items are NOT SUBJECT TO TURN-IN with the refrigerator when evacuated.

B-3. Explanation of Columns

The following provides an explanation of columns in the tabular list of Basic Issue Items List, Sec-

tion II, and Items Troop Installed or Authorized, Section III.

a. Source, Maintenance and Recoverability Code (SMR). Not applicable.

b. Federal Stock Number. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. This column indicates the Federal item name and any additional description of the item required.

d. Unit of Measure (U/M). A two character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc.

e. Quantity Furnished with Equipment (BIL). Not applicable.

f. Quantity Authorized (Items Troop Installed or Authorized). This column indicates the quantity of the item authorized to be used with the equipment.

Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

(1) SMR code	(2) Federal stock number	(3) Ref. No. & Mfr code	(3) Description	(4) Usable on code	(5) Unit of meas	(6) Qty auth
PO	7520-559-9618	CASE, Maintenance and Operation Manuals		EA		1
PO	5120-223-7396	PLIERs, Slip joint 6"		EA		1
PO	5120-517-8099	SCREWDRIVER, Flat		EA		1
PO	5120-234-8918	SCREWDRIVER, Cross		EA		1
PO	5120-198-5409	WRENCH, Socket-head (16436) H16		EA		1

APPENDIX C

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

1. General

a. Section I provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. Section II designates overall responsibility for the performance of maintenance operations on the identified end item or component. The implementation of the maintenance tasks upon the end item or component will be consistent with the assigned maintenance operations.

c. Section III lists the special tools and test equipment required for each maintenance operation as referenced from Section II.

d. Section IV contains supplemental instructions, explanatory notes and/or illustrations required for a particular maintenance function.

2. Explanation of Columns in Section II

a. *Functional Group Number.* The functional group is a numerical group set up on a functional basis. The applicable functional grouping indexes (obtained from TB 750-93-1 Functional Grouping Codes) are listed on the AC in the appropriate numerical sequence. These indexes are normally set up in accordance with their function and proximity to each other.

b. *Component Assembly Nomenclature.* This column contains a brief description of the components of each functional group.

c. *Maintenance Operations and Maintenance Levels.* This column lists the various maintenance operations (A through J) and indicates

O/C—Operator or crew

O—Organizational

F—Direct Support

H—General Support

D—Depot

The maintenance operations are defined as follows:

A—**SERVICE:** Operations required periodically to keep the item in proper operating condition, i.e., to clean, preserve, drain, paint, and replenish fuel, lubricants, hydraulic, and de-icing fluids, or compressed air supplies.

B—**ADJUST:** Regulate periodically to prevent malfunction. Adjustments will be made commensurate with adjustment procedures and associated equipment specifications.

C—**ALINE:** Adjust two or more components of an electrical or mechanical system so that their functions are properly synchronized or adjusted.

D—**CALIBRATE:** Determine, check, or rectify the graduation of an instrument, weapon, or weapons system or components of a weapons system.

E—**INSPECT:** Verify serviceability and detect incipient electrical or

cipient electrical or mechanical failure by measuring the mechanical or electrical characteristics of the item and comparing those characteristics with authorized standards. Tests will be made commensurate with test procedures and with calibrated tools and/or test equipment referenced in the MAC.

G—REPLACE: Substitute serviceable components, assemblies and subassemblies for unserviceable counterparts or remove and install the same item when required for the performance of other maintenance operations.

H—REPAIR: Restore to a serviceable condition by replacing unserviceable parts or by any other action required using available tools, equipment and skills—to include welding, grinding, riveting, straightening, adjusting and facing.

I—OVERHAUL: Restore an item to a completely serviceable condition (as prescribed by serviceability standards developed and published by the commodity commands) by employing techniques of "Inspect and Repair Only as Necessary" (I R O A N). Maximum use of diagnostic and test equipment is combined with minimum disassembly during overhaul. "Overhaul" may be assigned to any level of maintenance except organizational, provided the time, tools, equipment, repair parts authorized.

overhaul as applicable items, is limited maintenance level.

J—REBUILD: Restore to a conditionable to new by assembling to determine condition of each component and reassemble serviceable, rebuilt, assemblies, subassemblies, and parts.

d. Reference Note. This column, subdivided into columns K and L, is provided for enclosing the Special Tool and Test Equipment Requirements (Sec. III) and Remark IV) that may be associated with main operations (Sec. II).

C-3. Explanation of Columns in Section I

a. Reference Code. This column contains a number and a letter separated by a dash. The number references the T and TE requirements column on the MAC. The letter identifies the specific maintenance operation item is to be used with. The letter is representative of columns A through J on the MAC.

b. Maintenance Level. This column indicates the lowest level of maintenance authority to use the special tool or test equipment.

c. Nomenclature. This column lists name or identification of the tool or equipment.

d. Tool Number. This column lists manufacturer's code and part number, or general stock number, of tools and test equipment.

C-4. Explanation of Columns in Section II

a. Reference Code. This column consists of two letters separated by a dash, both of which are references to Section II. The first letter references column L and the second letter references a maintenance operation, columns A through J.

Section II. MAINTENANCE ALLOCATION CHART

Group Number	Component assembly nomenclature	Essentiality	Maintenance levels											Note Ref	
			Maintenance operations				Maintenance levels								
			A	B	C	D	E	F	G	H	I	J	K	L	
		Service	Adjust	Align	Calibrate	Inspect	Test	Replace	Repair	Overhaul	Rebuild		T & TE Rqmt	Remarks	
	Component assembly nomenclature														
2210	BODY CHASSIS OR HULL, AND ACCESSORY ITEMS														
	Data Plates:														
	Plates, Data														
3000	STORAGE EQUIPMENT COMPONENTS														
	Refrigerator:														
	Refrigerator	O/G			O/G			F	O						
	Rack assembly, floor							O							A
	Panel assemblies, prefabricated							O	O						
	Roller; gasket; conveyor door							O							
	Partition assembly							O	O						
	Clamp and strike assemblies; barrel bolt							O							
	Door panels; door latch and hinge assemblies	O/C						O							B
	Lock, door latch							O							
	Light assemblies							O							
	Bulb (lamp)							O/C							
	Switch assembly, light							O							
	Cover; gasket; guard; light							O							
	Receptacles, power							O							
	Cover; gasket; guard; power receptacle							O							
	Thermometer							O/C							
	Strainer assembly, drain	O/C						O							
	Canopy; ramp							O							

Section III. SPECIAL TOOL AND SPECIAL TEST EQUIPMENT REQUIREMENTS

Section IV. REMARKS

Reference code	Remarks
A—A	Service of floor rack assembly, includes removing, scrubbing wth. a soap and water solution, rinse and replace.
B—A	Service of door latch and hinge assemblies includes lubricating, polishing with suitable metal cleaner.

APPENDIX D

REPAIR PARTS LIST

Section I. INTRODUCTION

D-1. Scope.

This index contains a list of repair parts and equipment required for the performance of organizational and direct support maintenance of the prefabricated refrigerator.

D-2. General.

This repair parts and special tools list is divided into three principal sections and a National stock number index.

a. *Section II: Prescribed Load Allowance List (PLA).* A consolidated listing of repair parts quantitatively allocated for initial stockage at the organizational level. This is a mandatory minimum stockage allowance.

b. *Section III: Repair Parts List.* A list of repair parts authorized for the performance of maintenance at organizational level.

c. *Section IV: Repair Parts List.* A list of repair parts authorized for the performance of maintenance at the direct support level.

d. Allowances are based on 5,000 hours operation per year.

e. Part I applies to all models. Part II applies to type I models only. Part III applies to type II models only.

D-3. Explanation of Columns.

The following provides an explanation of columns in the tabular lists.

a. Source, Maintenance, and Recoverability Codes.

- | Code | Explanation |
|------|----------------------------|
| O | Organizational Maintenance |
| F | Direct Support Maintenance |
- (1) Source code indicates the source of the item.
- (2) Maintenance code indicates the lowest category of maintenance authorized to maintain the listed item. The maintenance level codes are:
- | Code | Explanation |
|------|----------------------------|
| O | Organizational Maintenance |
| F | Direct Support Maintenance |
- (3) Recoverability code indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are expendable.
- b. National stock number indicates the National stock number for the item.

d. Unit of issue indicates the unit used as a basis of issue, e.g., ea, pr, ft, yd, etc.

e. Quantity incorporated in unit pack indicates the actual quantity contained in the unit pack.

f. Quantity incorporated in unit indicates the quantity of repair parts in an assembly. Where an asterisk appears, refer to Table 4-2 and figures 4-1 and 4-2 for quantities applicable to a particular model.

g. Fifteen-Day organizational maintenance allowance.

(1) The allowance columns are divided into four subcolumns. Indicated in each subcolumn is the quantity of items authorized for the number of equipments supported. Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) The quantitative allowances for organizational level of maintenance represents one initial prescribed load for a 15-day period, for the number of equipments supported. Units and organizations authorized additional prescribed loads will multiply the number of prescribed loads authorized by the quantity of repair parts reflected in the appropriate density column to obtain the total quantity of repair parts authorized.

(3) Subsequent changes to allowances will be limited as follows: No change in the range of items is authorized. If additional items are considered necessary, recommendation should be forwarded to US Army Troop Support and Aviation Materiel Readiness Command for exception or revision to the allowance list. The range of items authorized will be made by this Command based upon engineering experience, demand data, or TAERS information.

identified with an asterisk allowance column.

(2) The quantitative allowances for maintenance will represent stockage for a 30-day period for number of equipments supported.

i. *Illustration.*

(1) Figure number indicates the number of the illustration by item is shown.

(2) Item or symbol number indicates callout number used to reference in the illustration.

D-4. Special Information.

Quantity shown in quantity incorporates reflects total for all units. Refer to figure 4-2 for quantity of specific unit.

D-5. How to Locate Repair Parts.

a. *When National stock number is unknown*

(1) *First.* Using the index of determine the functional & subgroup, i.e., engine, engine transmission, transmission & within which the repair part belongs is necessary because separate publications are prepared for functions or subgroups, and listings are distributed to functional groups.

(2) *Second.* Find the repair part illustration in the back of the publication covering the functional group or subgroup to which the repair part belongs.

(3) *Third.* Identify the repair part illustration figure and item number of repair part.

(4) *Fourth.* Using the repair part number find the functional group or subgroup the repair part and the illustration and item number as noted on the

part number. This index is arranged in alphanumeric sequence cross-referenced to page number and manufacturer's code.

Second. Refer to the appropriate page in parts listing. Locate the functional group or group of the repair part and the illustration and item number as indicated in the last columns of the parts listing.

Abbreviations

..... diameter
..... each
..... foot (feet)
..... inside diameter
..... inch(es)
..... long (length)
..... number(s)

npt National Pipe Thread
thk thick(ness)
v volt(s)
w.. watt(s)
w wide (width)

D-7. Federal Supply Codes

53853 Mid-South Industries, Inc.
87308 Capital Bolt & Screw
16245 Senco
32761 Kason
74545 Hubbel
72764 Southern Electric
87518 Standard Keil
64467 Wexler
75915 Southern Radio Supply
74951 Jarrow

Section II. PRESCRIBED LOAD ALLOWANCE

(1) Federal stock number	(2) Description	(2) 15-Day Org. Maint. Allowance			
		(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100
	LIGHT, PILOT (53853) 447-6063-001-534-MDSI	22	55	110	231
	SWITCH (74545) 1251	2	3	7	14
	GASKET: vertical (53853) 5804	4	6	12	26
	GASKET: vertical (53853) 5805	8	20	40	84
	GASKET: bottom (53853) 5806	8	20	40	84
	GASKET: top (53853) 5803	8	20	40	84

(1) SMR code	(2) Federal/National stock number	(3) Ref number & mfr code	Description	Usable- on code	Unit of meas	Qty inc in unit	(6) 15-Day Organizational Maintenance Allowance			
							(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100
			Section 3 – Repair Parts List for Organizational Level Part I Group 80 – Storage Equipment Components 8000 – Refrigerator Warehouse							
X20			Door, Walk-in	53853 90105	ea.	*	*	*	*	*
MO			Gasket, Door, Fab From		ft.					
MO			Rubber Sponge	74951 PHD-502N-1 (18'4" required for each gasket)			SEE GRP	9501		
PO			Hinge, Door	32761 1245	ea.	*	*	*	*	*
PO			Latch Assembly	32761 K-56	ea.	*	*	*	*	*
PO			Screw, Hinge, Mtg.	87308 C004	ea.	*	*	*	*	*
PO			Screw, Latch, Mtg.	87308 C004	ea.	*	*	*	*	*
X20			Panel A, Corner	53853 90113	ea.	*	*	*	*	*
PO			Camlock	53853 90021	ea.	*	SEE GRP	9501		
MO			Gasket, Panel Fab From		ft.					
MO			Rubber Sponge	74951 NX5028-1 (13' required for each gasket)			SEE GRP	9501		
PO			Screw, Camlock Mtg	87308 C003	ea.	*	*	*	*	*
X20			Panel B, Wall	53853 90114	ea.	*	*	*	*	*
PO			Camlock	53853 90021	ea.	*	SEE GRP	9501		
MO			Gasket Panel Fab From		ft.	*				
MO			Rubber Sponge	74951 NX502B-1 (13'2" required for each gasket)			SEE GRP	9501		
PO			Screw, Camlock Mtg	87308 C003	ea.	*	*	*	*	*

(2) Federal National stock number	(3) Description Ref number & mfr code	(4) Usable- on code	(5) Unit of meas Qty inc in unit	(6) 15-Day Organizational Maintenance Allowance				(7) Illustration		
				(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig No.	(b) Item No.	
	Gasket, Panel Fab From		ft.							
	Rubber Sponge	32761 NX5028-1		SEE	GRP	9501				
	(13" required for each gasket)									
5935-01-438-9943	Cap, Receptacle	74545 4884	ea.	*	*	*	*	*	D4	22
5935-00-222-0072	Boot, Receptacle	74545 7440	ea.	2					D4	21
	Receptacle, Female Plug	74545 7484	ea.	*	*	*	*	*	D4	21
	Receptacle, Male	74545 7486	ea.	2					D4	18
	Pilot Light Assembly	53853 477-6063- MDSI	ea.	*	*	*	*	*	D4	27
	Cover, Pilot Light	53853 25-1-SGS- MDSI	ea.	*	*	*	*	*	D4	27
	Vapor Proof Light Assembly	87518 V88100PC	ea.	*	*	*	*	*	D4	4
	Screw Camlock Mtg.	87308 C003	ea.	*	*	*	*	*	D4	13
	Screw,Cover Mtg.	87308 C006	ea.	*	*	*	*	*	D4	20
	Screw, Light Mtg.	87308 C005	ea.	*	*	*	*	*	D4	5
	Screw, Pilot Light	87308 C006	ea.	*	*	*	*	*	D4	23
	Screw, Receptacle	87308 C007	ea.	*	*	*	*	*	D4	19
	Screw, Strike Mtg.	87308 C004	ea.	*	*	*	*	*	D4	25
	Switch	74545 1251	ea.	*	2	3	7	14	D4	16
	Switch Cover	74545 1750	ea.	1	*	*	*	*	D4	16
	Screw, Switch Mtg.	87308 C006	ea.	*	*	*	*	*	D4	17
	Thermometer	64467 7269	ea.	*	*	*	*	*	D4	14
	Screw, Thermom-	87308 C005	ea.	*	*	*	*	*	D4	15

(1) SMR code	(2) Federal/National stock number	(3) Description Ref number & mfr code	Usable- on code	Unit of meas	Qty inc in unit	(6) 15-Day Organizational Maintenance alw			
						(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100
PO		Clip, Panel Wrench 75915 105002		ea.	*	*	*	*	*
MO		Gasket, Panel Fab From							
MO		Rubber Sponge 74951 NX502B-1 (13' required for each gasket)		ft.		SEE	GRP	9501	
PO		Screw, Camlock Mtg. 87308 C003		ea.	*	*	*	*	*
PO		Screw, Clip Mtg. 87308 C005		ea.	*	*	*	*	*
X20		Thermal Strip: Horizontal, Masonite, Fab From		ea.	*				
CO		Building Board, Hard Pressed, Vegetable Fiber (5½" x 38 9/16" required for each Thermal Strip)							
X20		Thermal Strip: Vertical, Masonite Fab From		ea.	*				
CO		Building Board, Hard Pressed, Vegetable Fiber (5½" x 55½" required for each Thermal Strip)							
X20		Panel H-1: Partition 53853 90133		ea.	*	*	*	*	*
PO		Bolt, Barrel 53853 4842		ea.	*	*	*	*	*
PO		Gasket, Bottom 53853 5806		ft.	*	SEE	GRP	9901	
MO		Gasket, Top 53853 5803		ft.	*	SEE	GRP	9901	
MO		Gasket, Vertical 53853 5805		ft.	*	SEE	GRP	9901	
PO		Screw, Barrel Bolt Mtg. 87308 C001		ea.	*	*	*	*	*

(1)	(2)	Federal/National stock number	(3) Ref number & mfr code	Description	Usable-on code	Unit of meas	Qty inc in unit	(6) 15-Day Organizational Maintenance alw				(7) Illustration	
								(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig. No.	(b) Item No.
MO			Gasket, Top	53853 5803		ft.	*	SEE GRP	9901			D1	4
MO			Gasket, Vertical	53853 5804		ft.	*	SEE GRP	9001			D1	13
PO			Screw, Barrel Bolt Mtg.	87308 C001		ea.	*	*	*	*	*	D1	16
X20			Panel H-3: Partition	53853 90135		ea.	*	*	*	*	*	D1	12
PO			Bolt, Barrel	53853 4842		ea.	*	*	*	*	*	D1	15
PO			Gasket, Bottom	53853 5806		ft.	*	SEE GRP	9901			D1	11
MO			Gasket, Top	53853 5803		ft.	*	SEE GRP	9901			D1	4
MO			Gasket, Vertical	53853 5805		ft.	*	SEE GRP	9901			D1	5
PO			Screw, Barrel Bolt Mtg.	87308 C001		ea.	*	*	*	*	*	D1	16
MO			Gasket, Vertical	53853 5804		ft.	*	SEE GRP	9901			D1	13
			Group 95 — General Use Standardized Parts										
			9501 BULK MATERIAL										
PO			Rubber Sponge	74951 NX502B-1		ft.		*	*	*	*		
PO			Tape, P.S.	53853 6818		rl.	4						
			Group 99 — Parts Peculiar										
			9901 — Parts Peculiar with more than one application										
MO			Gasket, Vertical	53853 5805		ft.		8	20	40	84		
PO			Gasket, Bottom	53853 5806		ft.		8	20	40	84		
MO			Gasket, Top	53853 5803		ft.		8	20	40	84		

(1) SMR code	(2) Federal/National stock number	(3) Description Ref number & mfr code	Usable- on code	Unit of meas	Qty inc in unit	(6) 15-Day Organizational Maintenance Allowance			
						(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100
		Section 3 – Repair Parts List for Organizational Level		ea.					
		Part II							
		Type I Assemblies		ea.					
		Group 80 – Storage Equipment Components		ea.					
		8000 – Refrigerator Warehouse							
X20		Floor Racks, Large	53853 90023	ea.	*	*	*	*	*
X20		Floor, Racks, Small	53853 90022	ea.	*	*	*	*	*
X20		Panel, CL, Left Ceiling	53853 90118	ea.	*	*	*	*	*
X20		Panel FL, Left Floor	53853 90117	ea.	*	*	*	*	*
PO		Camlock	53853 90021	ea.	*	*	*	*	*
PO		Drain, Inside	53853 90131	ea.	*	*	*	*	*
PO		Drain, Outside	53853 90130	ea.	*	*	*	*	*
MO		Gasket, Panel, Fab From			*				
MO		Rubber, Sponge 50'8" required for each gasket	74951 NX502B-1	ft.	SEE GRP	9501			
PO		Screw, Camlock Mtg.	87308 C003	ea.	*	*	*	*	*
PO		Screw, Drain Mtg.	87308 C005	ea.	*	*	*	*	*
PO		Screw, Strainer Mtg.	87308 C005	ea.	*	*	*	*	*
PO		Strainer, Inside	53853 90132	ea.	*	*	*	*	*

(2) Federal/National stock number	(3) Ref number & mfr code	Description	Usable- on code	Unit of meas	Qty inc in unit	(6) 15-Day Organizational Maintenance alw					(7) Illus- stration	
						(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig No.	(b) Item No.	
0	Panel, FC Center Floor	53853 90122	ea.	*	*	*	*	*	*	D1	3	
0	Panel, CC Center Ceiling	53853 90121	ea.	*	*	*	*	*	*	D1	3	
	Camlock	53853 90021	ea.	*	SEE GRP 9901					D4	12	
	Gasket, Panel Fab From									D4	6	
	Rubber, Sponge 50'8" required for each gasket	74951 NX502B-1	ft.		SEE GRP 9501							
	Screw, Camlock Mtg.	87308 C003	ea.	*	*	*	*	*	*	D4	13	
0	Panel A, Corner	53853 90113	ea.							D1	9	
	Gasket, Panel, Fab From									D4	6	
	Rubber, Sponge 13' required for each gasket	74951 NX502B-1	ea.		SEE GRP 9501							
	Camlock	53853 90021	ea.	*						D4	12	
0	Panel B, Wall	53853 90114	ea.	*						D1	10	
	Gasket, Panel Fab From				Ref					D4	6	
	Rubber Sponge 13'2" required for each gasket	74951 NX502B-1	ft.		SEE GRP 9501							
	Camlock	53853 90021	ea.		SEE GRP 9901					D4	12	
0	Panel C, Door	53853 90106	ea.	*						D1	8	
	Gasket, Panel Fab From				Ref					D4	6	
	Rubber Sponge 13' required for each gasket	74951 NX502B-1	ft.		SEE GRP 9501							

(1) SIN code	(2) Federal/National stock number	(3) Ref number & mfr code	Description	Usable- on code	Unit of meas	Qty inc in unit	(6) 15-Day Organizational Maintenance alw				(7) Illus- stration	
							(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig. No.	(b) Item No.
PO		Camlock	53853 90021		ea.		SEE	GRP	9901		D4	12
PO		Drain, Inside	53853 90131		ea.						D2	5
PO		Drain, Outside	53853 90130		ea.						D2	10
PO		Strainer, Drain	53853 90132		ea.						D2	3
X20		Panel, CL, Left Ceiling	53853 90118		ea.						D1	2
X20		Panel, CR, Right Ceiling	53853 90120		ea.						D1	2
X20		Panel, CC, Center Ceiling	53853 90121		ea.						D1	3
MO		Gasket, Panel Fab From									D4	6
MO		Sponge Rubber 50'8" required for each gasket	74951 NX5028-1		ft.		SEE	GRP	9501			
PO		Camlock	53853 90021		ea.		SEE	GRP	9901		D4	12
X20		Floor Rack, Large	53853 90023		ea.						D7	1
X20		Floor Rack, Small	53853 90022		ea.						D7	2
		Group 95 — General Use Standardized Parts			ea.							
		9501 — Bulk Material			ea.							
PO		Rubber, Sponge	74951 NX5028-1		ft.		*	*	*	*		
		Group 99 — Parts Peculiar			ea.							
		9901 — Parts Peculiar with more than one application			ea.							

(2) Federal/National stock number	(3) Description Ref number & mfr code	Usable- on code	(4) Unit of meas	(5) Qty inc in unit	(6) 15-Day Organizational Maintenance alt				(7) Illus- stration	
					(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig No.	(b) Item No.
	<p>Group 99 — Parts Peculiar</p> <p>9901 — Parts Peculiar with more than one application</p> <p>Camlock 53853 90021</p>	ea.		*	*	*	*			

(1) SMR code	(2) Federal/National stock number	(3) Description Ref number & mfr code	Usable- on code	Unit of meas	Qty inc in unit	(6) 15-Day Organizational Maintenance altw				(7) Doc. Date
						(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	
		Section 4 — Repair Parts List for Direct Support Level		ea.						
		Part I								
		Group 11 — Body Chassis or Hull, and Accessory Items		ea.						
X20		Door, Walk-in 53853 90105		ea.		*	*	*	*	D3
MO		Gasket, Door Fab From								D3
MO		Rubber Sponge 74951 PHD502N-1 18'4" required for each gasket		ft.		SEE GRP	9501			
X20		Hinge, Door 32761 1245		ea.		*	*	*	*	D3
PO		Latch Assembly 32761 K-56		ea.		*	*	*	*	D3
PO		Screw, Hinge Mtg. B7308 C004		ea.		*	*	*	*	D3
PO		Screw, Latch Mtg. 87308 C004		ea.		*	*	*	*	D3
X20		Panel A, Corner 53853 90113		ea.		*	*	*	*	D1
PO		Camlock 53853 90021		ea.		SEE GRP	9901			D4
MO		Gasket, Panel Fab From								D4
MO		Rubber Sponge 74951 NX502B-1 13' required for each gasket		ft.		SEE GRP	9501			
PO		Screw, Camlock Mtg. 87308 C003				*	*	*	*	D4
X20		Panel B, Wall 53853 90114		ea.		*	*	*	*	D1
PO		Camlock 53853 90021		ea.		SEE GRP	9901			D4
MO		Gasket Panel, Fab From								D4
MO		Rubber Sponge 74951 NX502B-1 13'2" required for each gasket		ft.		SEE GRP	9501			
PO		Screw, Camlock Mtg. 87308 C003		ea.		*	*	*	*	D4

SMR code	Federal/National stock number	Ref number & mfr code	Description	Usable-on code	Unit of meas	Qty inc in unit	(6) 15-Day Organizational Maintenance alw			
							(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100
PO		Screw, Clip Mtg.	B7308 C005		ea.					
X20		Thermal Strip Horizontal Masonite, Fab From	53B53 90110		ea.					
CO		Building Board, Hard Pressed, Vegetable Fiber 5" x 38" required for each Thermal Strip			ea.					
X20		Thermal Strip, Vertical Masonite Fab From	53853 90111		ea.					
CO		Building Board Hard Pressed, Vegetable Fiber 5½" x 55½" required for each Thermal Strip			ea.					
X20		Panel H-1 Partition	53853 90133		ea.	*	*	*	*	*
PO		Bolt, Barrel	53853 4B42		ea.	*	*	*	*	*
PO		Gasket, Bottom	53853 5B06		ft.		SEE GRP	9901		D1
MO		Gasket, Top	53B53 5B03		ft.	*	*	*	*	*
MO		Gasket, Vertical	53853 5B05		ft.	*	*	*	*	*
PO		Screw, Barrel Bolt Mtg.	8730B C001		ea.	*	*	*	*	*
X20		Panel H-2 Partition	53853 90134		ea.	*	*	*	*	*
PO		Bolt, Barrel	53B53 4842		ea.	*	*	*	*	*
PO		Gasket, Bottom	53853 5806		ft.		SEE GRP	9901		D1
MO		Gasket, Top	53853 5803		ft.	*	*	*	*	*
MO		Gasket, Vertical	53B53 5B04		ft.	*	*	*	*	*
PO		Screw, Barrel Bolt Mtg.	87308 C001		ea.	*	*	*	*	*

Ref No.	(2) Federal-National Stock Number	(3) Description Ref number & mfr code	(4) Usable- on code	Unit of meas.	Qty inc in unit	(6) 15-Day Organizational Maintenance Allowance				(7) Illustration	
						(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig. No.	(b) Item No.
x20		Panel H-3 Partition	53853 90135	ea.	*	*	*	*	*	D1	12
F0		Bolt, Barrel	53853 4842	ea.	*	*	*	*	*	D1	15
F0		Gasket, Bottom	53853 5806	ft.	SEE	GRP	9901			D1	11
F0		Gasket, Top	53853 5803	ft.	*	*	*	*	*	D1	4
F0		Gasket, Vertical	53853 5805	ft.	*	*	*	*	*	D1	5
F0		Screw, Barrel Bolt Mtg.	87308 C001	ea.	*	*	*	*	*	D1	16
F0		Gasket, Vertical	53853 5804	ft.	SEE	GRP	9901			D1	13
		Group 95 - General Use Standardized Parts		ea.							
		9501 - Bulk Material		ea.							
PO		Rubber Sponge	74951 NX502B-1	ft.							
F0		Tape, PS	53853 6818	ea.							
		Group 99 - Parts Peculiar		ea.							
		9901 - Part Peculiar with more than one application		ea.							
MO		Gasket, Vertical	53853 5805	ft.	40	40	84	168			
PO		Gasket, Bottom	53853 5806	ft.	40	40	84	168			
MO		Gasket, Top	53853 5803	ft.	40	40	84	168			
PO		Camlock	53853 90021	ea.	*	*	*	*			

(1) SMR code	(2) Federal/National stock number	(3) Ref number & mfr code	(4) Description	(5) Usable- on code	Unit of meas	Qty inc in unit	(6) 15-Day Organizational Maintenance alw				I F N
							(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	
		Section 4 – Repair Parts List for Direct Support Level		ea.							
		Part II									
		TYPE I – ASSEMBLIES									
		Group 80 – Storage Equipment Components		ea.							
		8000 – Refrigerator Warehouse		ea.							
X20		Floor, Racks, Large 53853 90023		ea.	*	*	*	*	*	*	D
X20		Floor, Racks, Small 53853 90022		ea.	*	*	*	*	*	*	D
X20		Panel, CL, Left 53853 90118	Ceiling	ea.	*	*	*	*	*	*	D
X20		Panel, FL, Left 53853 90117	Floor	ea.	*	*	*	*	*	*	D
PO		Camlock	53853 90021	ea.		SEE GRP	9901				D4
PO		Drain, Inside	53853 90131	ea.	*	*	*	*	*	*	D2
PD		Drain, Outside	53853 90130	ea.	*	*	*	*	*	*	D2
PD		Strainer, Inside Drain	53853 90132	ea.	*	*	*	*	*	*	D2
MO		Gasket, Panel Fab From									D4
MO		Rubber Sponge	74951 NX502B-1	ft.		SEE GRP	9501				
		50'8" required for each gasket									
PO		Screw, Camlock	87308 C003	Mtg.	ea.	*	*	*	*	*	D4
PO		Screw, Drain Mtg.	87308 C005	Mtg.	ea.	*	*	*	*	*	D2
PD		Screw, Strainer Mtg.	87308 C005		ea.	*	*	*	*	*	D2
X20		Panel, CR, Right Ceiling	53853 90120		ea.	*	*	*	*	*	D1

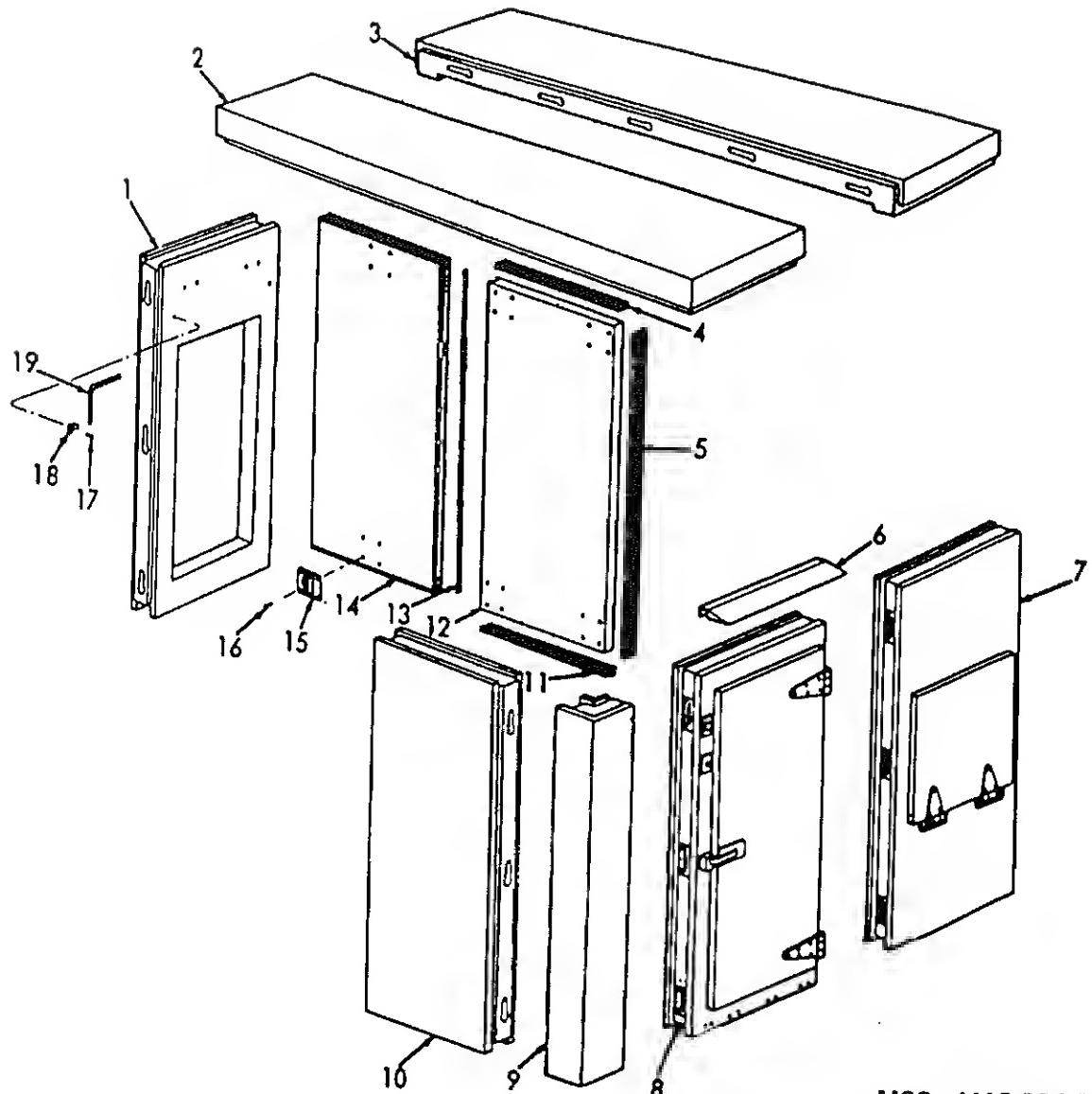
(1) SHP code	(2) Federal National stock number	(3) Description Ref number & mfr code	Usable- on code	Unit of meas	Qty in unit	(6) 15-Day Organizational Maintenance Allowance				(7) Illustration	
						(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(e) Fig. No.	(f) Item No.
X20		Panel, FC, Center Floor	53853 90122	ea.	*	*	*	*	*	D1	3
X20		Panel, CC, Center Ceiling	53853 90121	ea.	*	*	*	*	*	D1	3
PO		Camlock	53853 90021	ea.		SEE GRP	9901			D4	12
MO		Gasket, Panel Fab From									
MO		Rubber Sponge 40'8" required for each gasket	74951 NX502B-1	ft.		SEE GRP	9501				
PO		Screw, Camlock Mtg.	87308 C003	ea.	*	*	*	*	*	D4	13
X20		Panel H-1 Partition	53853 90133	ea.	*	*	*	*	*	D1	12
X20		Panel H-2 Partition	53853 90134	ea.	*	*	*	*	*	D1	14
PO		Bolt, Barrel	53853 4842	ea.	*	*	*	*	*	D1	15
PO		Gasket, 8bottom	53853 5806	ft.	*	*	*	*	*	D1	11
MO		Gasket, Top	53853 5803	ft.	*	*	*	*	*	D1	4
MO		Gasket, Vertical	53853 5805	ft.	*	*	*	*	*	D1	5
PO		Screw, Barrel Bolt Mtg.	87308 C001	ea.	*	*	*	*	*	D1	16
X20		Panel H-3 Partition	53853 90135	ea.	*	*	*	*	*	D1	12
PO		Bolt, Barrel	53853 4842	ea.	*	*	*	*	*	D1	15
PO		Gasket, 8bottom	53853 5806	ft.	*	*	*	*	*	D1	11
MO		Gasket, Top	53853 5803	ft.	*	*	*	*	*	D1	4
MO		Gasket, Vertical	53853 5805	ft.	*	*	*	*	*	D1	5
PO		Screw, Barrel Bolt Mtg.	87308 C001	ea.	*	*	*	*	*	D1	16
MO		Gasket, Vertical	53853 5804	ft.	*	*	*	*	*	D1	13

(1) SMR code	(2) Federal/National stock number	(3) Ref number & mfr code	(4) Description	(5) Usable on code	(6) Qty inc in unit	15-Day Organizational Maintenance alw				(10) Fig. No.
						(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	
PO		Rubber Sponge 13' required for each gasket	74951 NX502B-1	ft.	SEE	GRP	9501			D4
PO		Camlock	53853 90021	ea.						D1
X20		Panel B, Wall	53853 90114	ea.						D4
MO		Gasket, Panel Fab From								D4
MO		Rubber Sponge 13'2" required for each gasket	74951 NX502B-1	ft.	SEE	GRP	9501			D4
PO		Camlock	53853 90021	ea.						D1
X20		Panel C, Door	53853 90106	ea.						D4
MO		Gasket, Panel Fab From								D4
MO		Rubber Sponge 13' required for each gasket	74951 NX502B-1	ft.	SEE	GRP	9501			D4
PO		Camlock	53853 90021	ea.						D4
PO		Cover, Pilot Light	53853 25-1-SGS- MDSI	ea.						D4
PO		Receptacle, Power	74545 7486	ea.						D4
PO		Plug, Power	74545 7484	ea.						D4
PO		Boot, Receptacle	74545 7440	ea.						D4
PO		Switch	74545 1251	ea.						D4
PO		Vapor Proof Light	87518 VBB100PC	ea.						D4
X20		Door, Walk-in	53B53 90105	ea.						D3
MO		Gasket, Door Fab From								D3
MO		Rubber Sponge 18'4" required for each gasket	74951 PHD502N-1	ft.	SEE	GRP	9501			

(1) S&R Code	(2) Federal/National stock number	(3) Description Ref number & mfr code	(4) Usable- on code	(5) Unit of meas Qty inc in unit	(6) 15-Day Organizational Maintenance alw					(7) Illus- stration	
					(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig No.	(b) Item No.	
P0		Panel D, Evaporator 53853 90115		ea.					D1	1	
P0		Gasket, Panel Fab From							D4	6	
P0		Rubber Sponge 74951 NX502B-1 13' required for each gasket		ft.	SEE	GRP	9501				
P0		Camlock 53853 90021		ea.	SEE	GRP	9901		D4	12	
P0		Clip, Wrench 75915 105002		ea.					D1	18	
P0		Wrench, Hexagon 32761 1145		ea.					D1	19	
		Group 95 - General Use Standardized Parts		ea.							
		9501 - Bulk Material		ea.							
P0		Rubber Sponge 74951 NX502B-1		ft.	*	*	*	*	*		
		Group 99 - Parts Peculiar		ea.							
		9901 - Parts Peculiar with more than one application		ea.							
P0		Camlock 53853 90021		ea.	*	*	*	*	*		

(1) SMR code	(2) Federal/National stock number	(3) Description Ref number & mfr code	(4) Usable- on code	(5) Unit of meas Qty inc in unit	(6) 15-Day Organizational Maintenance alw				(8) Fig No
					(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	
		Section 4 – Repair Parts List for Direct Support Level Part III TYPE II – ASSEMBLIES	ea.						
		Group 80 – Storage Equipment	ea.						
		8000 – Refrigerator Warehouse	ea.						
X20		Floor Rack, Large 53853 90023	ea.	*	*	*	*	*	D
X20		Floor Rack, Small 53853 90022	ea.	*	*	*	*	*	D
X20		Floor Panel, FL 53853 90117	ea.	*	*	*	*	*	D
MO		Gasket, Panel Fab From							
MO		Rubber Sponge 74951 NX502B-1 50'8" required for each gasket	ft.		SEE GRP 9501				
PO		Camlock 53853 90021	ea.		SEE GRP 9901				
PO		Drain, Inside 53853 90131	ea.	*	*	*	*	*	
PO		Drain, Outside 53853 90130	ea.	*	*	*	*	*	
PO		Drain, Strainer 53853 90132	ea.	*	*	*	*	*	
X20		Floor Panel, FR 53853 90119	ea.	*	*	*	*	*	D
X20		Floor Panel, FC 53853 90122	ea.	*	*	*	*	*	D
MO		Gasket, Panel Fab From							
MO		Rubber Sponge 74951 NX502B-1 50'8" required for each gasket	ft.		SEE GRP 9501				
PO		Camlock 53853 90021	ea.		SEE GRP 9901				
		Group 95 – General Use Standardized Parts	ea.						
		9501 – Bulk Material	ea.						

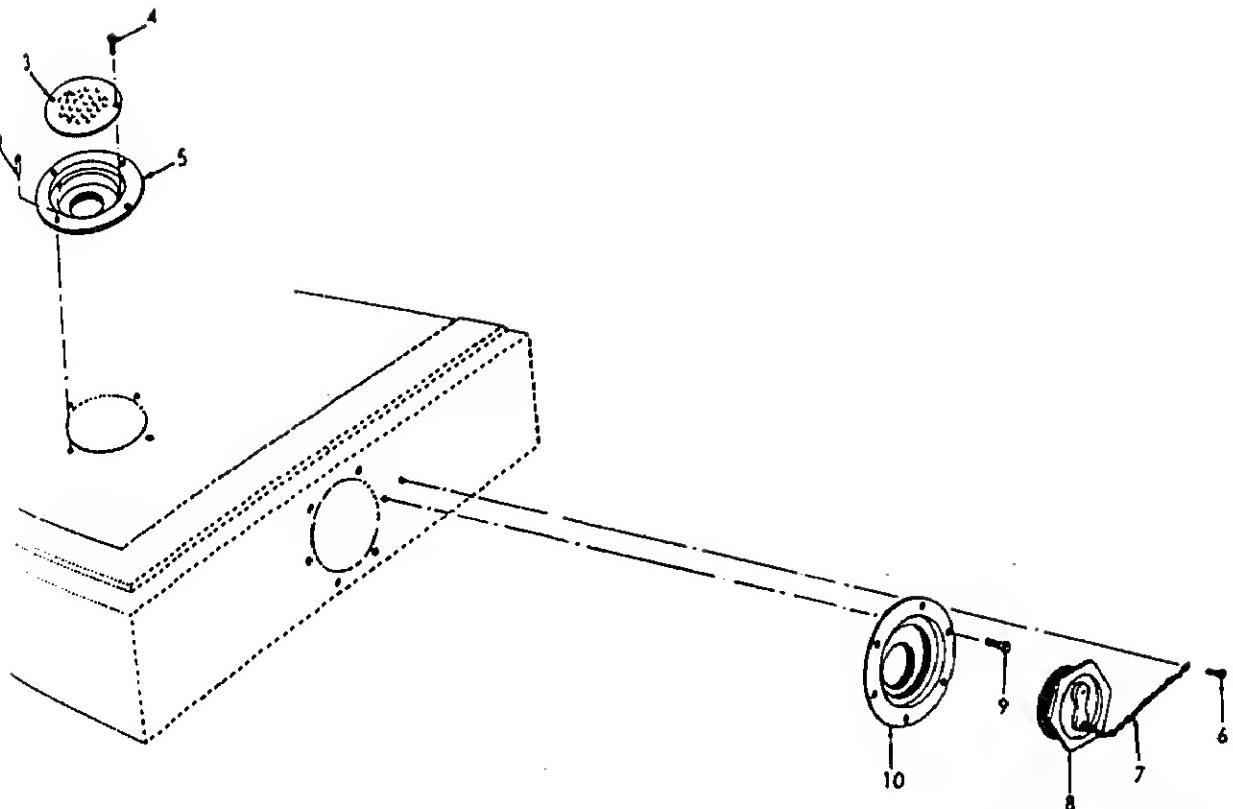
(1) SMR Code	(2) Federal National stock number	(3) Description Ref number & mfr code	(4) Usable- on code	(5) Unit of meas inc in unit	(6) 15-Day Organizational Maintenance Allowance				(7) Illustra- tion (b) Item No.	
					(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(e) Fig. No.	
i0		Rubber Sponge 74951 NX502B-1 Group 99 – Parts Peculiar 9901 – Parts Peculiar with more than one application		ft. * *	*	*	*	*		
i0		Camlock 53853 90021		ea. *	*	*	*	*		



MSC 4110-204-2

Figure 1. Compartment Panels
INDEX TO PARTS, FIGURE 1

REF NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME
1	8000	PANEL D	8	8000	PANEL C	14	8000	PANEL H-
2	8000	PANEL FL. CL.	9	8000	PANEL D			

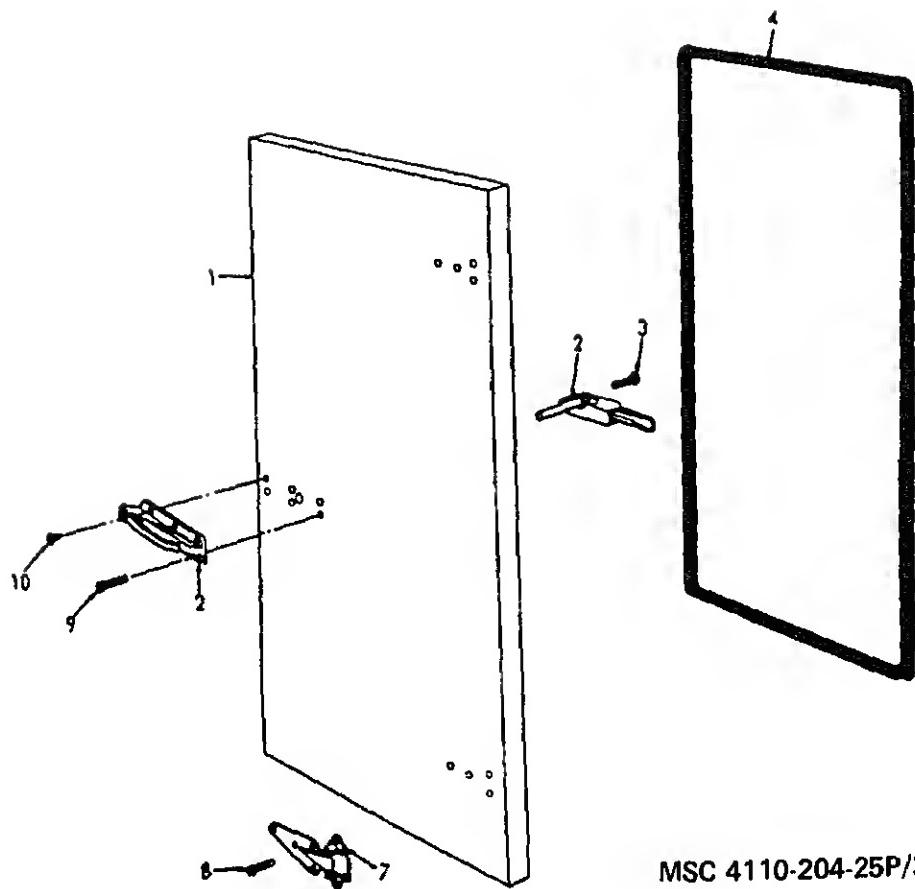


MSC 4110-204-25P/2

Figure 2. Floor Drain Components

INDEX TO PARTS, FIGURE 2

REF NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME
2	8000	SCREW	7	8000	CHAIN
			8	8000	PLUG
			9	8000	SCREW



MSC 4110-204-25P/3

Figure 3. Walk-in Door, Latch, and Hinge

INDEX TO PARTS, FIGURE 3

REF NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME
1	8000	DOOR			

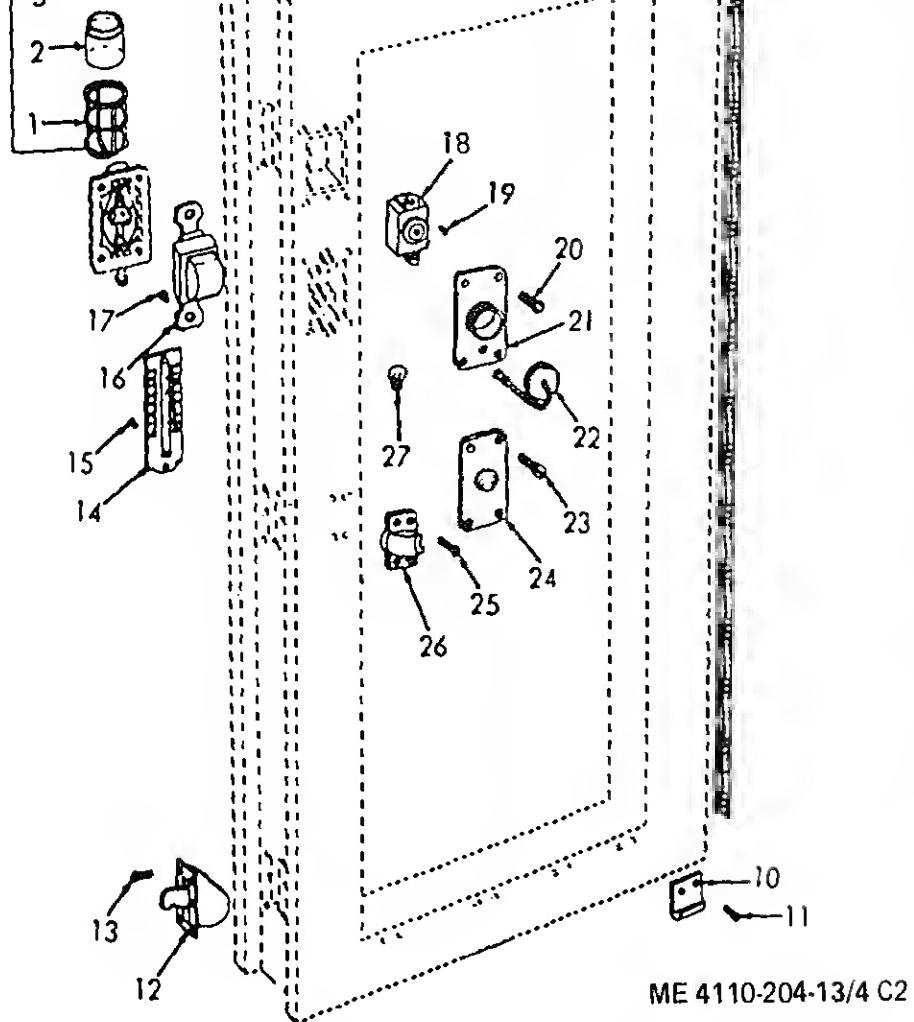


Figure 4. Panel C Components

INDEX TO PARTS, FIGURE 4

REF NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME
1	8000	GUARD	10	8000	SUPPORT	19	8000	SCREW
2	8000	GLOBE	11	8000	SCREW	20	8000	SCREW
3	8000	LAMP	12	8000	CLAMP AY	21	8000	COVER
4	8000	LIGHT AY	13	8000	SCREW	22	8000	CAP
5	8000	SCREW	14	8000	THERMOMETER	23	8000	SCREW
6	8000	GASKET	15	8000	SCREW	24	8000	COVER
			16	8000	SWITCH	25	8000	SCREW

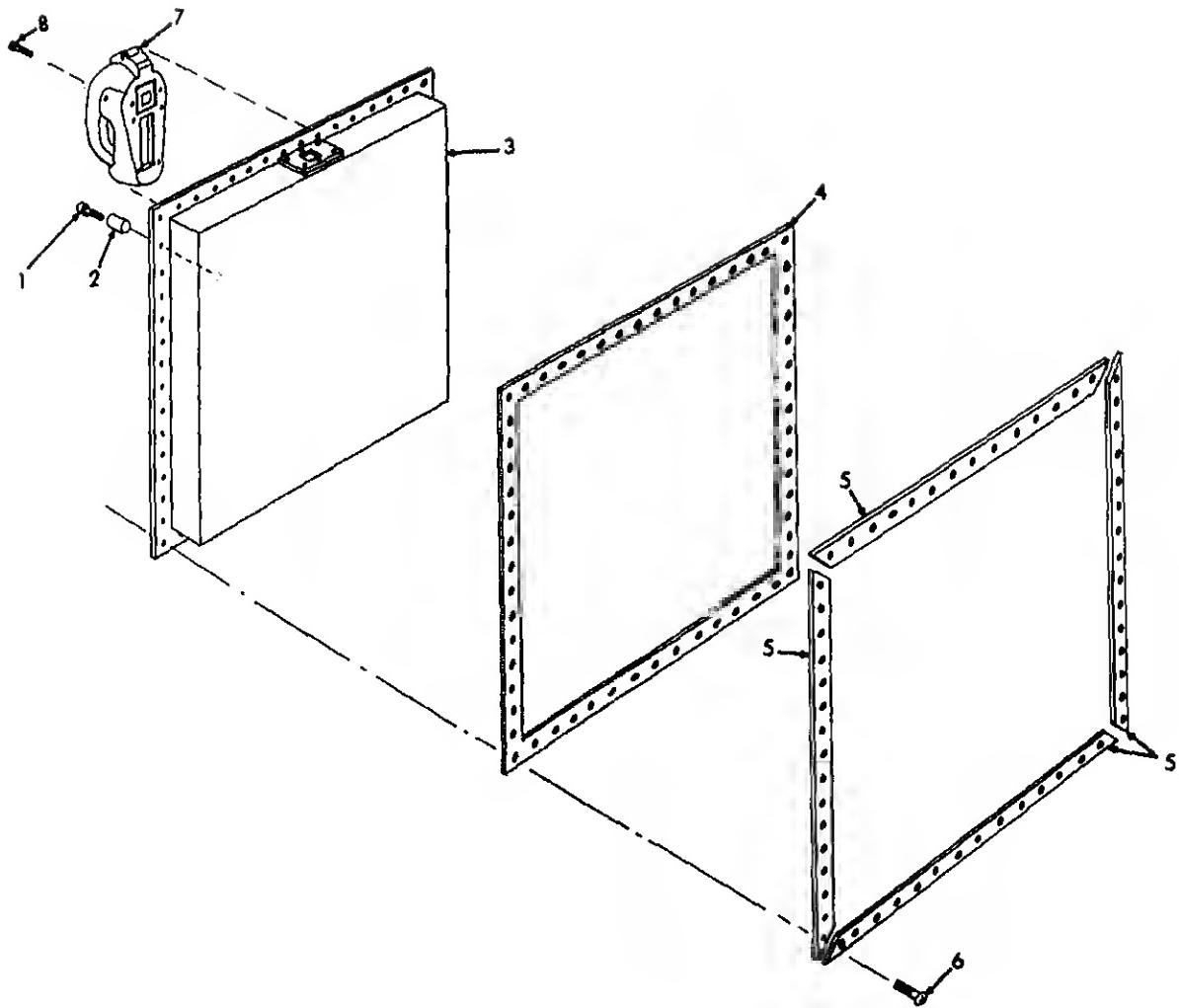
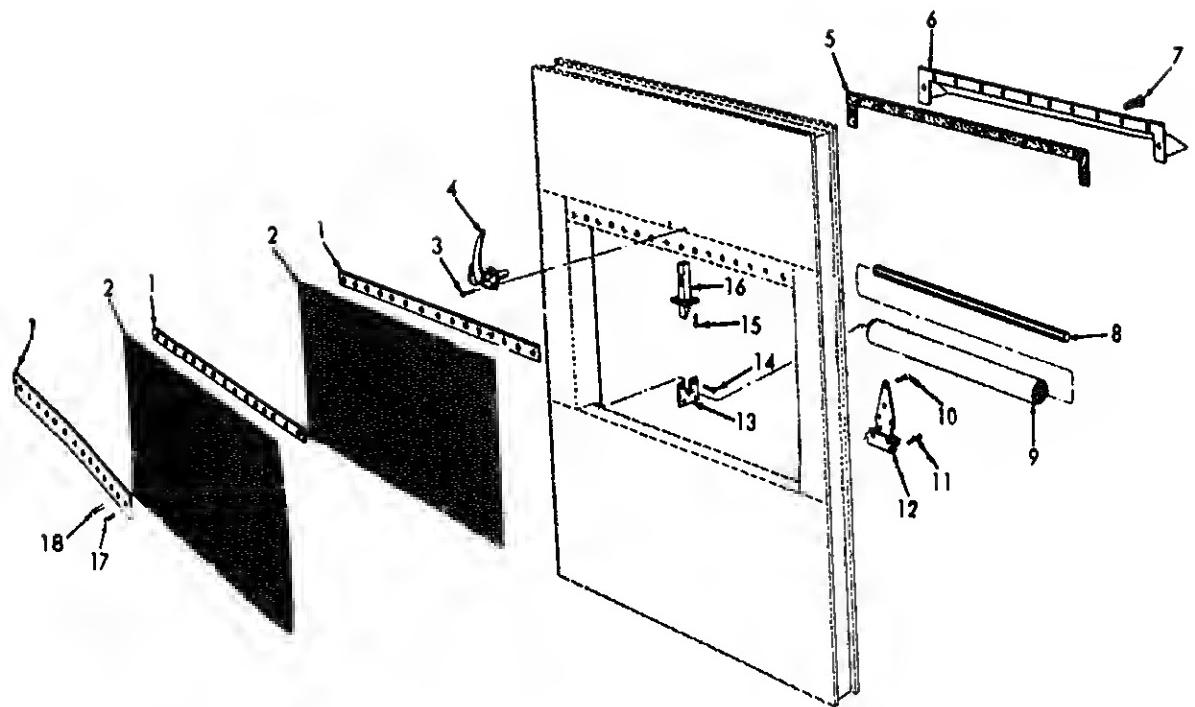


Figure 5. Conveyor Door.

INDEX TO PARTS FIGURE 5

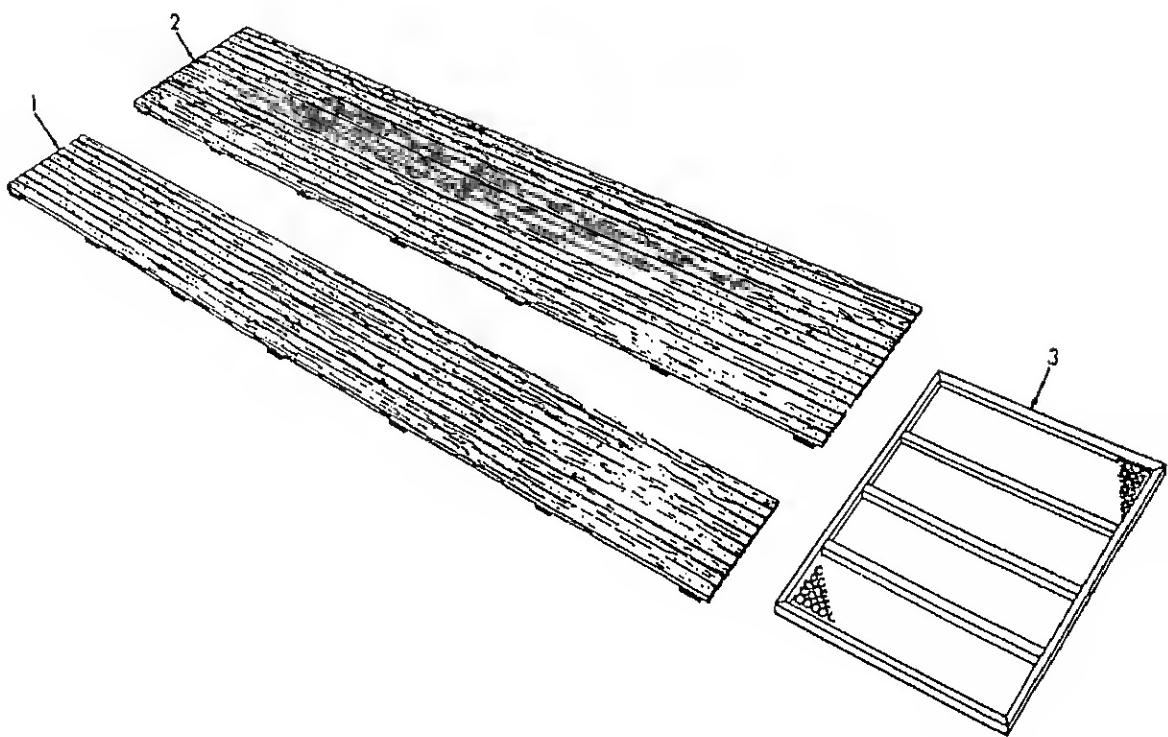
REF NO.	ITEM NAME
1	SCREW
2	BUMPER
3	DOOR
4	GASKET
5	RETAINER
6	SCREW
7	LATCH (1800 J)



MSC 4110-204-25P/6

Figure 6. Panel G.
INDEX TO PARTS, FIGURE 6

REF. NO.	FUNCT GROUP	ITEM NAME	REF NO.	FUNCT GROUP	ITEM NAME
1	8000	STRIP	10	8000	SCREW
2	8000	CURTAIN	11	8000	SCREW
3	8000	SCREW	12	8000	HINGE
4	8000	HANDLE	13	8000	BRACKET
5	8000	GASKET	14	8000	SCREW
	8000	CANOPY	15	8000	SCREW
			16	8000	LATCH



MSC 4110-204-25P/7

Figure 7. Floor Racks and Ramp.

INDEX TO PARTS, FIGURE 7

REF NO.	FUNCT GROUP	ITEM NAME
------------	----------------	--------------

1 8000 FLOOR RACK

INDEX

	Paragraph	Page
Basic issue tools and equipment	3-2	3-1
Controls and instruments:		
Controls and instruments	2-9	2-6
General	2-8	2-6
Conveyor door	3-23	3-7
Conveyor door curtain	3-26	3-8
Conveyor door canopy	3-27	3-8
Conveyor door latch and handle	3-24	3-7
Conveyor door roller	3-25	3-8
Daily preventive maintenance	3-6	3-1
Data, tabulated	1-4, 4-4	1-5, 4-1
Description	1-2	1-1
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By Order of the Secretary of the Army:

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For explanation of abbreviations used, see AR 320-50.

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TM 5-6115-200-20 MND P

DATE

1 APR 72

TITLE

GENERATOR SET 10 KW
NSN 6115-00-231-7286

BE EXACT... PIN-POINT WHERE IT IS

IN THIS SPACE TELL WHAT IS WRONG
AND WHAT SHOULD BE DONE ABOUT IT:

TEAR ALONG DOTTED LINE

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.	
6	2-1 a			In line 6 of paragraph 2-1a the manual states the engine has 6 cylinders. The engine on my set only has 4 cylinders. Change the manual to show 4 cylinders
81		4-3	S	Callout ^D on figure 4-3 is pointing at an <u>ATM</u> bolt. In the key to fig. 4-3, item 16 is called a <u>shim</u> . Please correct one or the other.
125	line 20			I ordered a gasket, item 19 on figure B-16 by NSN 2910-00-762-3001. I got a gasket but it doesn't fit. Supply says I got what I ordered so the NSN is wrong.

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL MANUALS



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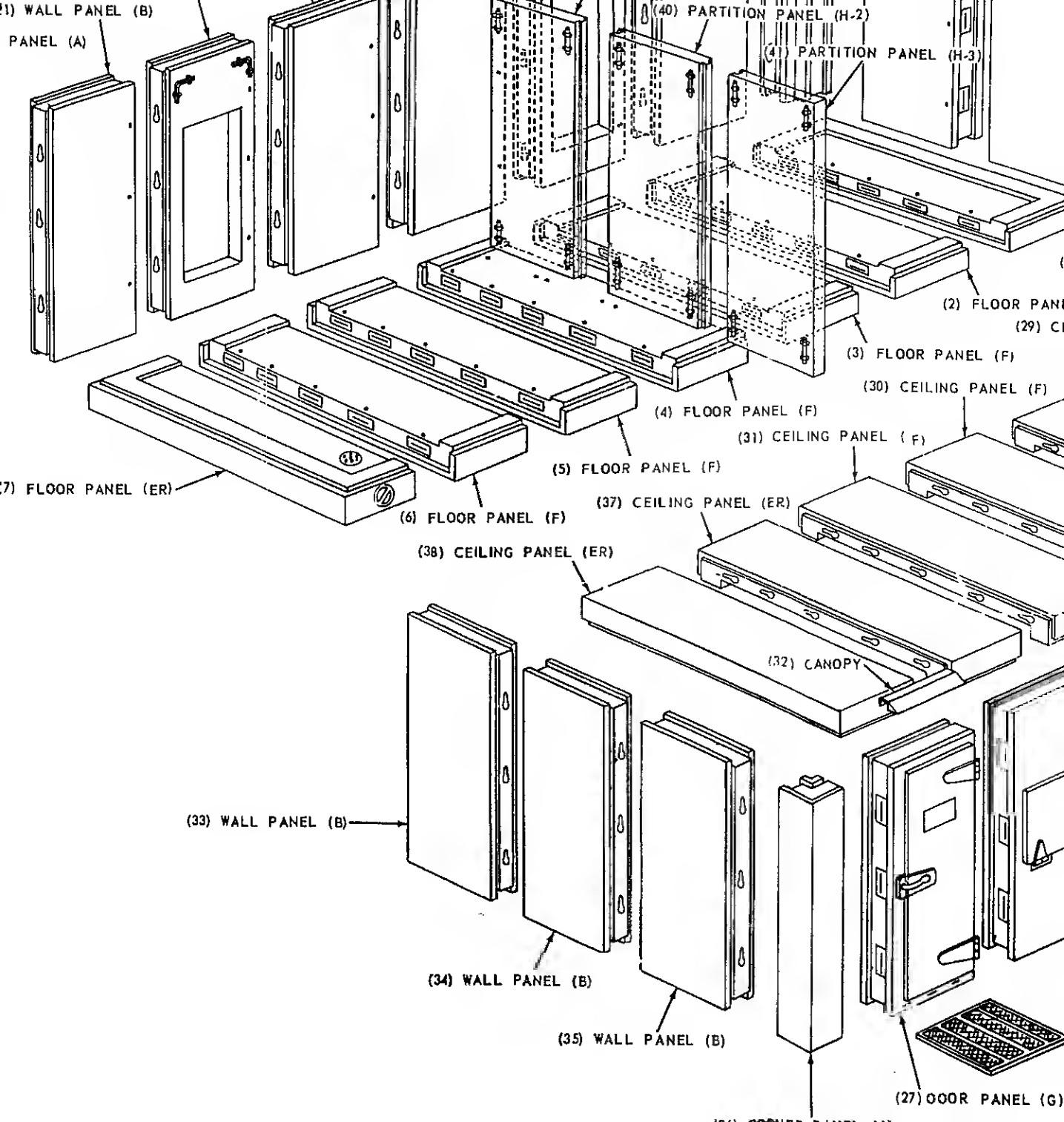


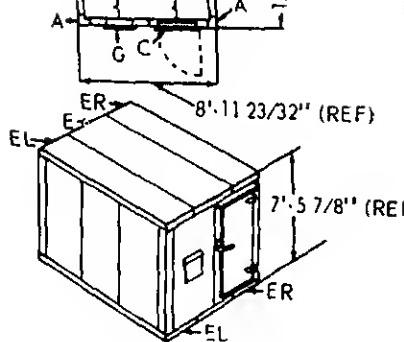
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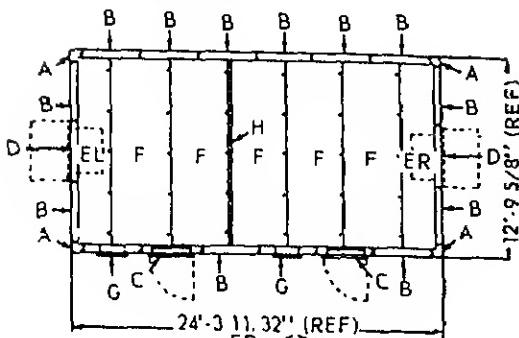
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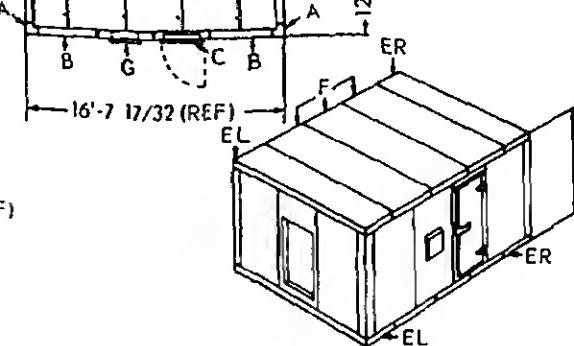




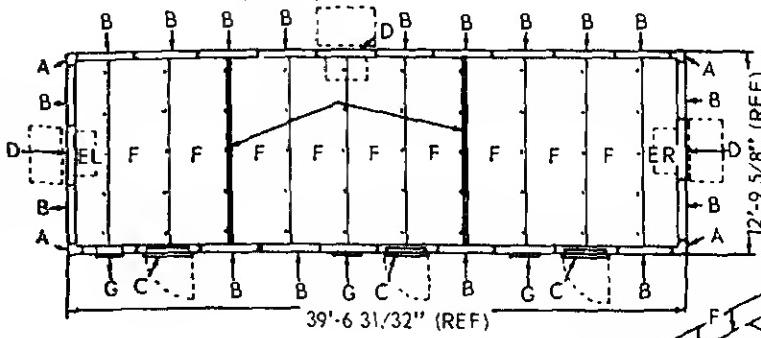
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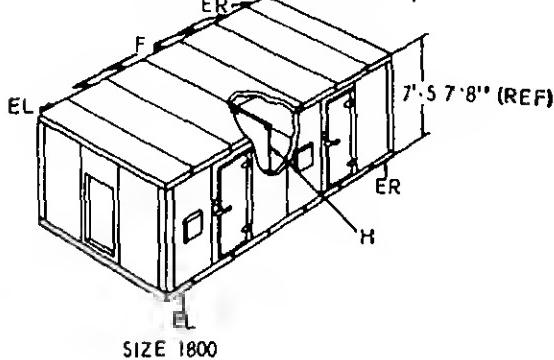
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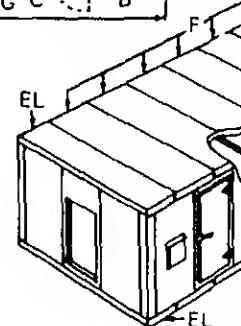
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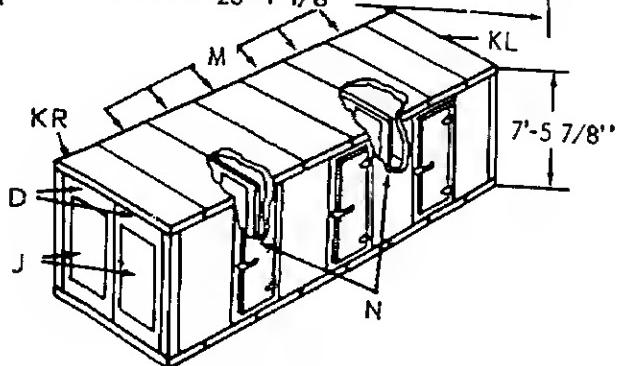
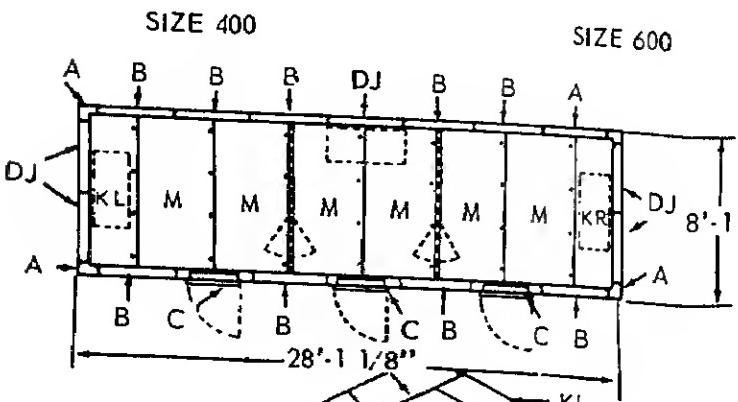
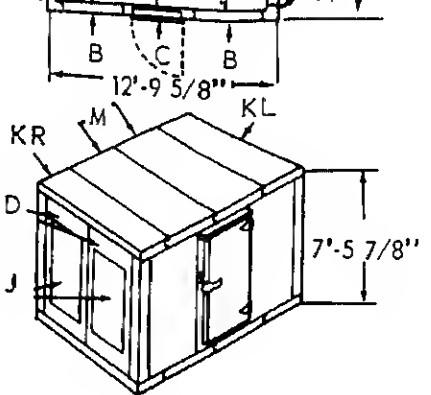
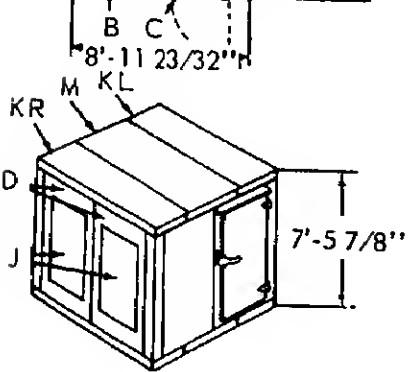


SIZE 3000

TOTAL FT.	PANEL FASTENERS NO. REQ'D	PANEL DESIGNATION AND NO. REQUIRED												FLOOR RACK		
		A	B	C	D	EL	ER	F	G*	H-1	H-2	H-3	J	TOTAL		
25	102	4	8	1	1	2	2	2	1	0	0	0	1	20	2	4
20	150	4	11	1	1	2	2	6	1	0	0	0	2	28	6	4
15	195	4	14	2	2	2	2	10	2	1	1	1	2	39	10	4
94	390	4	22	4	4	2	2	26	4	3	3	3	4	77	26	4

PANEL DESIG.	NOMENCLATURE	DRG. NO.
A	CORNER PANEL	5-13-2653
B	STO. WALL PANEL	5-13-2654
C	WALK-IN DOOR PANEL	5-13-2655
	WALK-IN DOOR	5-13-2656
O	EVAPORATOR PANEL	5-13-2658
J	EVAPORATOR PANEL PLUG	5-13-1144
EL	FLOOR OR CEILING PANEL	5-13-2658
ER	FLOOR OR CEILING PANEL	5-13-2659
F	FLOOR OR CEILING PANEL, CENTER	5-13-2660
G	CONVEYOR DOOR PANEL	5-13-2670
H	PARTITION PANEL	5-13-2661

ME 4110-204.13/4-1 C5



SIZE 1400

			J	A	B	C	D	E
400	405	84	2	4	5	1	2	2
600	605	106	2	4	7	1	2	2
800	795	128	4	4	7	1	4	2
1200	1175	172	5	4	8	3	5	2
1400	1375	194	5	4	10	3	5	2
1600	1565	216*	6	4	11	3	6	2

* WHEN DESIRED "G" OR "C" PANELS MAY BE OMITTED WITH

PANEL DESIG.	NOMENCLATURE
A	CORNER PANEL
B	STO. WALL PANEL
C	WALK-IN DOOR PANEL
	WALK-IN DOOR
'O' W/ 'J'	UNIT COOLER PANEL
KL	FLOOR OR CEILING PANEL
KR	FLOOR OR CEILING PANEL
M	FLOOR OR CEILING PANEL, CENTER
N	PARTITION